

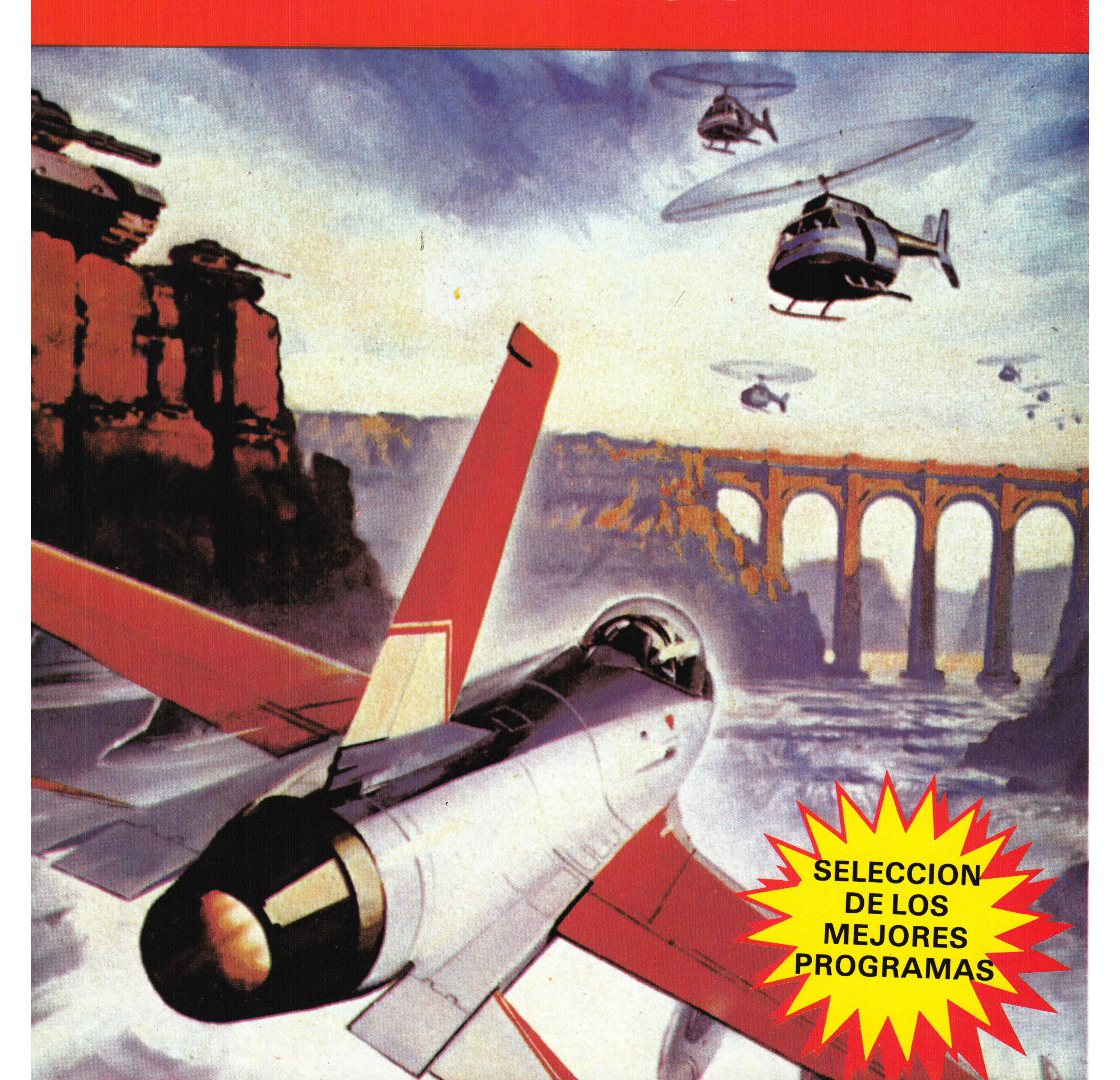
AMIGOS DEL
AMSTRAD
295 PTS.
N.º 8
AÑO II
LA ABEJA
ABEJA
BIO-RITMOS
CRASH
CIRCUITOS ELECTRICOS
DADOS-21
TENIS
EDITOR
CHR-EDITOR
SUBMARINO
ABECEDARIO
GRAFICAS LINEALES
LABERINTO
LABERINTO MAGICO
MUSICA
PUNTOS
MOSQUITO

TODO SOBRE EL

N.º 16 - 690 Ptas.

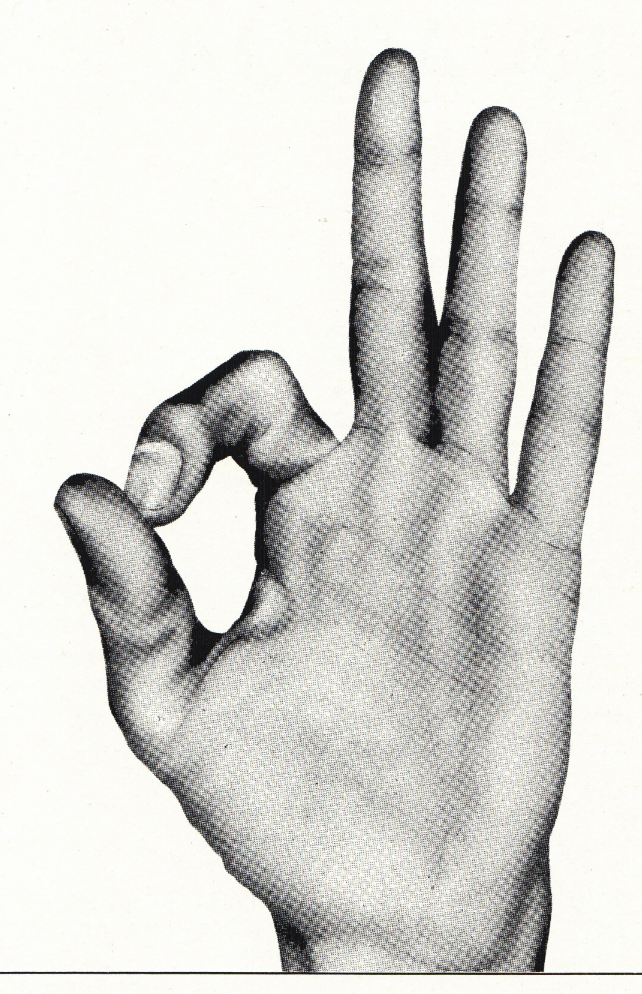
AMSTRAD

AIRATACK

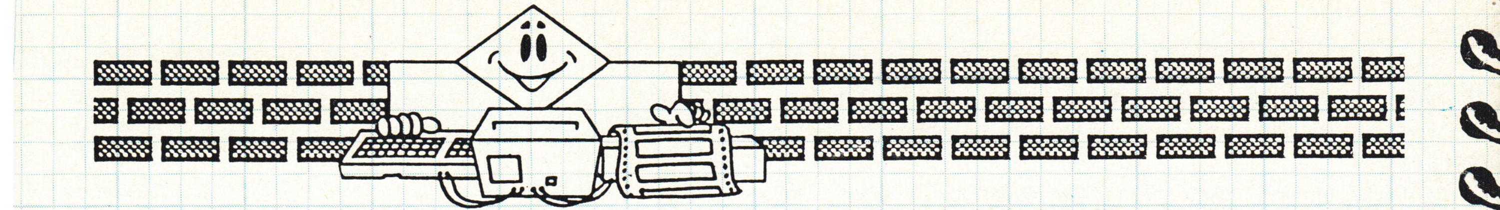


AMIGOS DEL AMSTRAD

SUMARIO



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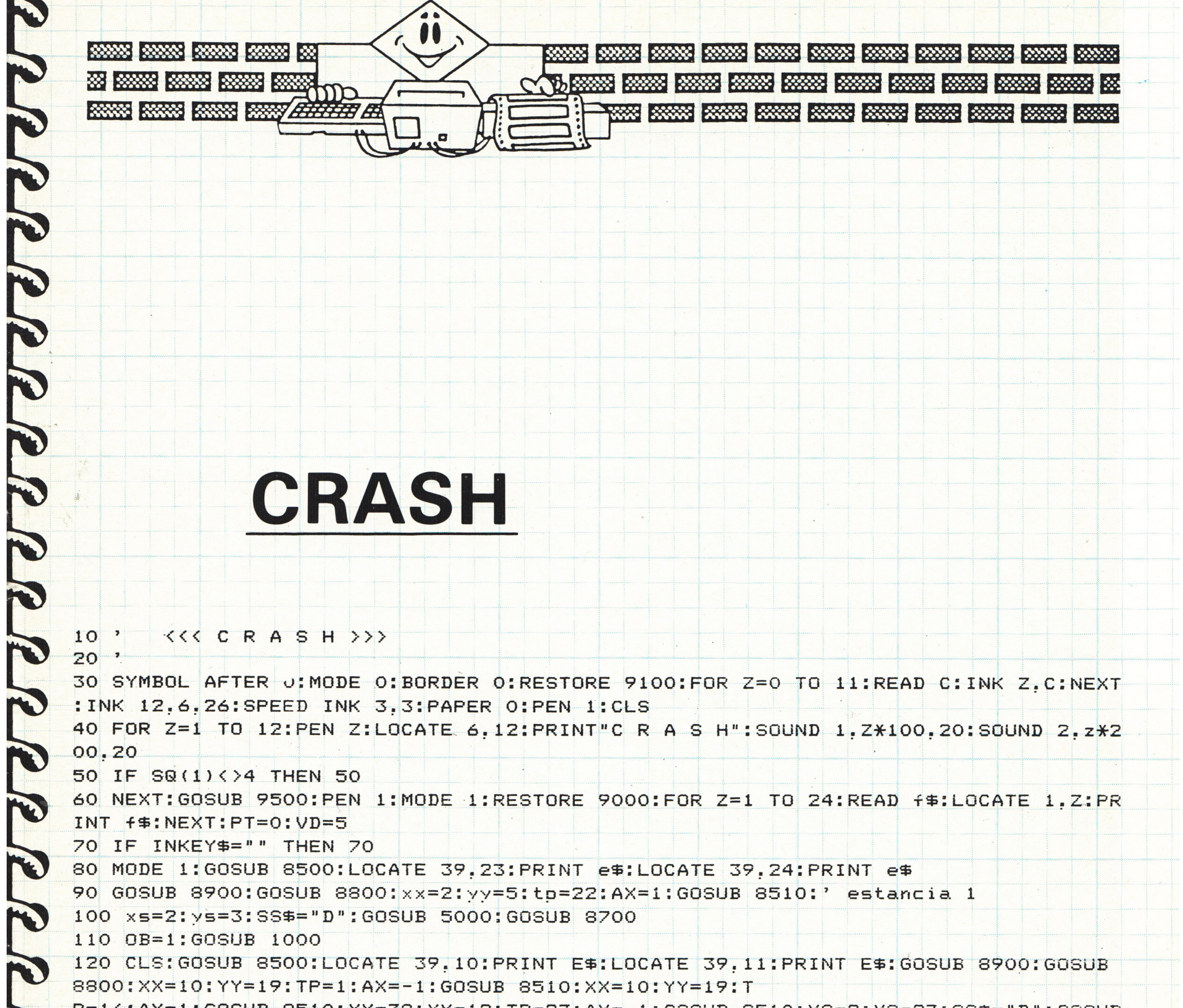
EXPLICACION DE LOS PROGRAMAS

LA ABEJA

```
10 '     <<< L A    A B E J A >>>
20 ' COPYRIGHT:                                          M. JESUS CABELLO MARTINEZ
                                        Y
   F. ALONSO-PASTOR DEL COSO                            #1985#
25 MODE 0:BORDER 0:INK 0,0:INK 1,2,8:PAPER 0:PEN 1:CLS:SPEED INK 5,5:LOCATE 3,12
:PRINT"L A   A B E J A":FOR T=1 TO 2000:NEXT
30 MODE 1:BORDER 0:SPEED INK 50,50:SYMBOL AFTER 0:RESTORE 9000:FOR Z=0 TO 11:REA
D C:INK Z,C:NEXT:INK 12,2,8:INK 13,6,26:PAPER 0:PEN
1:CLS:FOR Z=1 TO 22:READ E$:LOCATE 1,Z:PRINT E$:SOUND 1,100,5:NEXT:SOUND 1,500,1
0:GOSUB 9200
40 IF INKEY$="" THEN 40
50 CLS:IN$=CHR$(174):J$=STRING$(39,32):LOCATE 2,5:PRINT"DEFINICION DE LAS TECLAS
 DE JUEGO:":LOCATE 1,7:PRINT IN$;"PARA SUBIR LA ABEJ
A?":GOSUB 9100:S$=L$:LOCATE 1,7:PRINT J$:LOCATE 1,7:PRINT "PARA SUBIR ";S$
60 LOCATE 1,9:PRINT IN$;"PARA BAJAR LA ABEJA?":GOSUB 9100:B$=L$:LOCATE 1,9:PRINT
 J$:LOCATE 1,9:PRINT "PARA BAJAR ";B$
70 LOCATE 1,11:PRINT IN$;"PARA LLEVAR A LA DERECHA A LA ABEJA?":GOSUB 9100:D$=L$
:LOCATE 1,11:PRINT J$:LOCATE 1,11:PRINT "PARA LA DER
ECHA ";D$
80 LOCATE 1,13:PRINT IN$;"PARA LLEVAR A LA IZQUIERDA A LA ABEJA?":GOSUB 9100:I$=
L$:LOCATE 1,13:PRINT J$:LOCATE 1,13:PRINT "PARA LA I
ZQUIERDA ";I$
85 LOCATE 1,15:PRINT IN$;"PARA ABANDONAR EL JUEGO?":GOSUB 9100:AB$=L$:LOCATE 1,1
5:PRINT J$:LOCATE 1,15:PRINT "PARA ABANDONAR EL JUEG
O ";AB$
87 LOCATE 1,18:PRINT IN$;"NIVEL DE JUEGO? (1 DIFICIL - 5 FACIL)":GOSUB 9100:VNJ=
VAL(L$):IF VNJ<1 OR VNJ>5 THEN 87 ELSE LOCATE 1,18:P
RINT J$:LOCATE 1,18:PRINT"NIVEL";VNJ
90 LOCATE 1,23:PRINT"SI ESTAS DE ACUERDO CON ESTAS TECLAS    PULSA S SINO PULSA
```

```
CUALQUIER OTRA TECLA"
100 L$=INKEY$:IF L$="" THEN 100 ELSE IF L$<>"S" AND L$<>"s" THEN 50
105 NJ=VNJ*10:PT=0:NV=1:VD=5:KD$=STRING$(4,46)
110 MODE 0:SPEED INK 50,50:GOSUB 8200:FT=-1
120 LL$=STRING$(20,LD$):PEN 2:LOCATE 1,2:PRINT LL$:LOCATE 1,24:PRINT LL$:FOR Z=3
 TO 23:LOCATE 1,Z:PRINT LD$:LOCATE 20,Z:PRINT LD$:NE
XT
130 GOSUB 8000:GOSUB 8300
140 RANDOMIZE TIME:FOR Z=1 TO NV*10 STEP NV:O=INT(Z/10+1):IF O>6 THEN O=6
150 XO=INT(RND*18+2):YO=INT(RND*21+3):IF TEST(XO*32-16,408-(YO*16))<>0 THEN 150
160 LOCATE XO,YO:ON O GOSUB 9300,9310,9320,9330,9340,9350
170 NEXT:PEN 2:FOR Z=1 TO INT(NV/5+1):GOSUB 8100:NEXT:YA=4
180 FOR XI=2 TO 19:IF TEST(XI*32-16,408-(YA*16))=0 AND TEST(XI*32-16,408-((YA+1)
*16))=0 AND TEST(XI*32-16,411-(YA*16))=0 AND TEST(XI
*32-16,411-((YA+1)*16))=0 THEN XA=XI:XI=20
190 NEXT:IF XI=20 THEN YA=YA+1:GOTO 180
200 SPEED INK 2,2:SX=1:SY=0:GOSUB 9550:FOR T=1000 TO 10 STEP -5:SOUND 1,T,1:SOUN
D 2,T+10,1:NEXT
205 IF SQ(1)<>4 THEN 205
210 L$=INKEY$:IF L$=AB$ THEN 10000
215 FOR T=1 TO NJ:NEXT
220 IF L$=S$ THEN SY=-1:SX=0
230 IF L$=B$ THEN SY=1:SX=0
240 IF L$=D$ THEN SX=1:SY=0
250 IF L$=I$ THEN SX=-1:SY=0
255 TO=TEST((XA+SX)*32-16,412-((YA+SY)*16)):T1=TEST((XA+SX)*32-16,412-((YA+SY-1)
*16)):IF TO=2 OR T1=2 THEN 9600
260 TO=TEST((XA+SX)*32-16,408-((YA+SY)*16)):T1=TEST((XA+SX)*32-16,408-((YA+SY-1)
*16)):IF TO<>0 AND TO<>4 OR T1<>0 AND T1<>4 THEN GOS
UB 7000:IF TO=T1 THEN GOSUB 7000
270 SOUND 1,500,3:GOSUB 9500:XA=XA+SX:YA=YA+SY:SOUND 2,10,3:GOSUB 9550:IF FT<10
THEN 210
280 FOR T=1000 TO 10 STEP -10:SOUND 1,T,3,15:SOUND 2,T+100,2,12:SOUND 3,T+500,1,
10:NEXT
290 IF SQ(1)<>4 THEN 290
300 NV=NV+1:FOR Z=1 TO 100:L$=INKEY$:NEXT:GOTO 110
7000 IF TO=5 OR T1=5 THEN PT=PT+10:GOSUB 8000
7010 IF TO=3 OR T1=3 THEN PT=PT+20:GOSUB 8000
7020 IF TO=6 OR T1=6 THEN PT=PT+40:GOSUB 8000
7030 IF TO=9 OR T1=9 THEN PT=PT+60:GOSUB 8000
7040 IF TO=10 OR T1=10 THEN PT=PT+50:GOSUB 8000
7050 IF TO=11 OR T1=11 THEN PT=PT+30:GOSUB 8000
7060 RETURN
8000 PEN 10:LOCATE 4,1:PRINT USING"PUNTOS: ######";PT:SOUND 1,50,3:FT=FT+1:RETUR
N
8100 PEN 2:RANDOMIZE TIME:KD=RND:XI=INT(RND*16)+3:XF=INT(RND*16)+3:YI=INT(RND*19
+4):YF=INT(RND*19+4)
8105 IF ABS(XF-XI)>12 OR ABS(YF-YI)>14 THEN 8100 ELSE IF KD>0.5 THEN 8140
8110 IF ABS(XF-XI)<2 OR ABS(YF-YI)<2 OR TEST(XI*32-16,408-(YI*16))<>0 THEN 8100
8120 FOR K1=XI TO XF STEP SGN(XF-XI):IF TEST(K1*32-16,408-(YI*16))=0 THEN LOCATE
 K1,YI:PRINT LD$ ELSE K1=99*SGN(XF-XI)
8130 NEXT:RETURN
8140 FOR K1=YI TO YF STEP SGN(YF-YI):IF TEST(XI*32-16,408-(K1*16))=0 THEN LOCATE
 XI,K1:PRINT LD$ ELSE K1=99*SGN(YF-YI)
8150 NEXT:RETURN
8200 PEN 10:LOCATE 6,1:PRINT"FRUTAS:":FOR O=1 TO 6:XO=3:YO=O*3+3:LOCATE XO,YO:ON
 O GOSUB 9300,9310,9320,9330,9340,9350:PEN 13:LOCATE
 5,YO:PRINT KD$;USING "## ptos.";O*10:NEXT:PEN 12:LOCATE 4,24:PRINT"PARA CONTINU
```

```
AR":LOCATE 4,25:PRINT"PULSA UNA TECLA"
8210 IF INKEY$="" THEN 8210 ELSE CLS:RETURN
8300 PEN 10:LOCATE 6,25:PRINT USING"VIDAS:##";VD:RETURN
9000 DATA 0,24,6,3,15,19,12,21,9,16,8,7
9010 DATA "           L A   A B E J A",,," Es un juego emocionante en el que lo",
,mas importante es comerse muchos frutos.,,," Sin e
mbargo, las paredes te impediran",,hacerlo y tienes que procurar no chocar,,con
ellas.
9020 DATA ,,," Las teclas de movimiento de la abeja",,podras elegirlas tu mismo
,,,," PULSA CUALQUIER TECLA PARA COMENZAR"
9100 L$=INKEY$:IF L$="" THEN 9100 ELSE RETURN
9200 SYMBOL 176,8,28,46,111,95,95,46,28:SYMBOL 177,8,110,223,191,191,94,56,0:SYM
BOL 178,6,6,14,30,60,56,28,12:SYMBOL 179,0,0,60,90,2
19,219,90,60:SYMBOL 180,102,24,0,0,0,0,0,0
9210 SYMBOL 181,24,36,66,129,129,66,36,24:SYMBOL 182,0,24,52,126,90,44,24,0:SYMB
OL 183,0,108,190,191,191,95,126,56:SYMBOL 184,28,62,
34,62,34,28,8,0:SYMBOL 185,0,0,0,65,34,28,42,54:SYMBOL 186,65,65,93,65,28,0,0,0:
SYMBOL 187,127,127,127,0,247,247,247,0
9220 TU$=CHR$(22)+CHR$(1):TD$=CHR$(22)+CHR$(0):A1$=CHR$(184):A2$=CHR$(185):A3$=C
HR$(186):LD$=CHR$(187)
9230 DIM O$(15):O$(1)=CHR$(176):O$(2)=CHR$(177):O$(3)=CHR$(178):O$(4)=CHR$(179):
O$(14)=CHR$(180):O$(5)=CHR$(181):O$(15)=CHR$(182):O$
(6)=CHR$(183)
9240 FOR Z=1 TO 10:NM$(Z)="AMSTRAD":PT(Z)=100:NEXT:RETURN
9300 PEN 5:PRINT O$(0):RETURN
9310 PEN 3:PRINT O$(0):RETURN
9320 PEN 11:PRINT O$(6):RETURN
9330 PEN 6:PRINT O$(3):RETURN
9340 PEN 8:PRINT O$(5);TU$:LOCATE XO,YO:PEN 10:PRINT O$(15);TD$:RETURN
9350 PEN 9:PRINT O$(4);TU$:LOCATE XO,YO:PEN 7:PRINT O$(14);TD$:RETURN
9500 LOCATE XA,YA:PRINT" ":LOCATE XA,YA-1:PRINT" ":RETURN
9550 PEN 4:LOCATE XA,YA:PRINT A1$:PEN 1:LOCATE XA,YA-1:PRINT A2$:PEN 13:LOCATE X
A,YA:PRINT TU$;A3$;TD$:RETURN
9600 INK 2,2,8:PEN 2:LOCATE XA,YA:PRINT A1$:LOCATE XA,YA-1:PRINT A2$:LOCATE XA,Y
A:PRINT TU$;A3$;TD$:FOR T=1 TO 100:SOUND 1,1000,1:SO
UND 2,10,1:SOUND 3,3000,1:NEXT
9610 IF SQ(1)<>4 THEN 9610
9620 INK 2,6:VD=VD-1:GOSUB 8300:FOR T=1 TO 1000:L$=INKEY$:NEXT:IF VD>0 THEN 110
ELSE 10000
10000 IF PT<PT(10) THEN 10100 ELSE FOR Z=1 TO 10:L$=INKEY$:NEXT:NM$="":PEN 1:CLS
:LOCATE 4,4:PRINT IN$;"TU NOMBRE?":FOR Z=1 TO 10
10010 L$=INKEY$:IF L$=CHR$(13) THEN Z=10:GOTO 10030
10020 IF L$="" THEN 10010 ELSE NM$=NM$+L$:LOCATE 5+Z,10:PRINT L$
10030 NEXT
10040 pt(10)=pt:nm$(10)=nm$
10050 FOR Z=1 TO 10:FOR ZZ=1 TO 9:IF PT(ZZ)>=PT(ZZ+1) THEN 10070
10060 K=PT(ZZ):PT(ZZ)=PT(ZZ+1):PT(ZZ+1)=K:K$=NM$(ZZ):NM$(ZZ)=NM$(ZZ+1):NM$(ZZ+1)
=K$
10070 NEXT:NEXT
10100 CLS:LOCATE 4,1:PRINT"PUNTUACIONES:":FOR Z=1 TO 10:PEN Z+1:LOCATE 1,Z*2+1:P
RINT NM$(Z):LOCATE 14,Z*2+1:PRINT USING"######";PT(Z
):NEXT
10110 PEN 12:LOCATE 3,23:PRINT"O OTRA PARTIDA":LOCATE 3,24:PRINT"P OTRO PROGRAMA
"
10120 L$=INKEY$:IF L$="" THEN 10120 ELSE L$=UPPER$(L$):IF L$="O" THEN MODE 1:PEN
 1:GOTO 50 ELSE IF L$<>"P" THEN 10120
10130 MODE 1:BORDER 1:SYMBOL AFTER 0:INK 0,1:INK 1,24:PAPER 0:PEN 1:CLS:PRINT"PR
EPARADO PARA EL SIGUIENTE PROGRAMA":RUN""
```



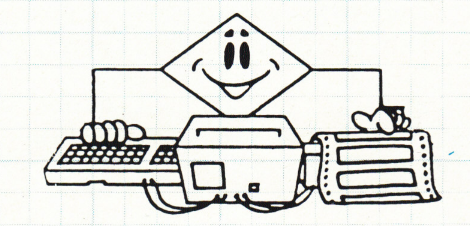
CRASH

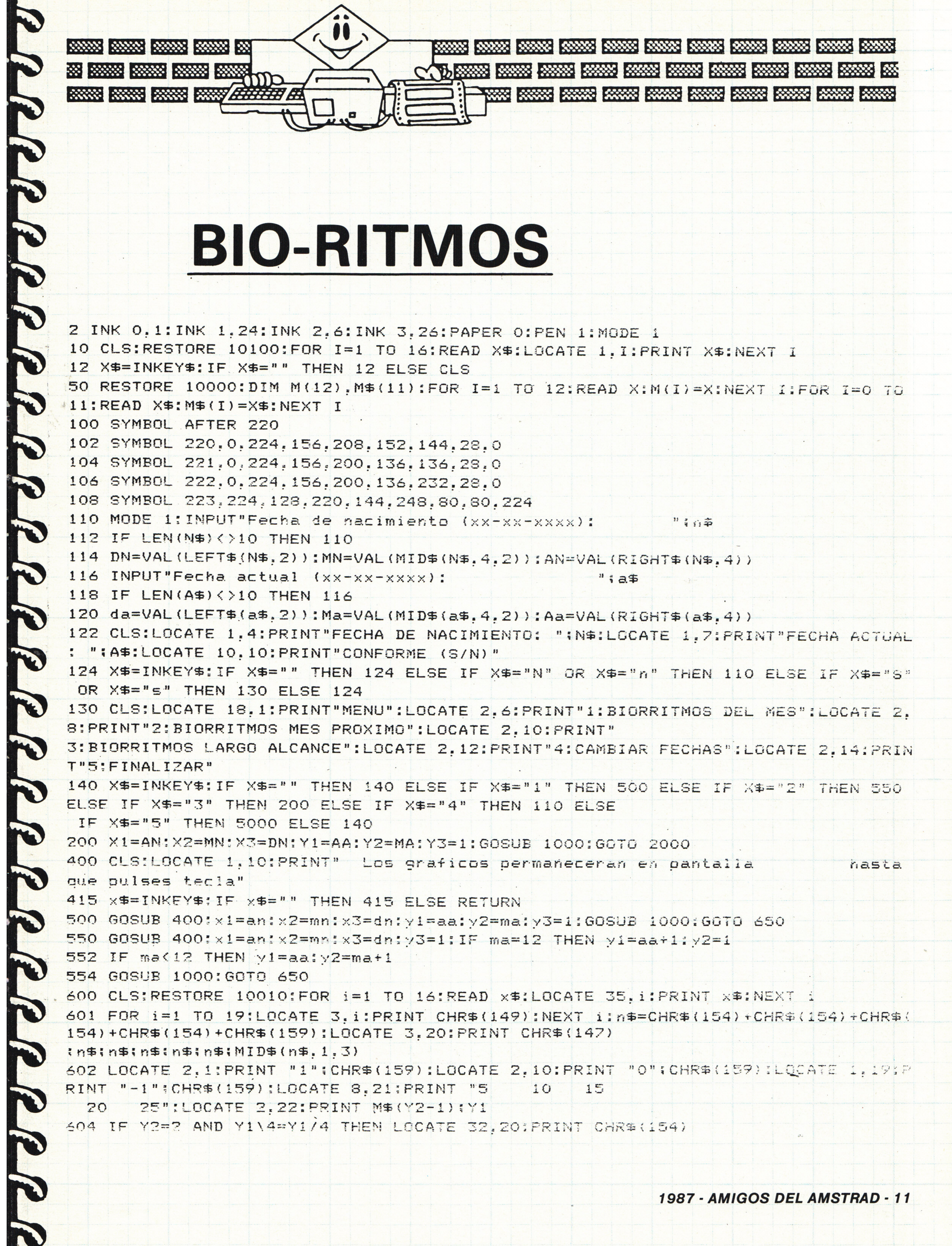
```
10 '    <<< C R A S H >>>
20 '
30 SYMBOL AFTER 0:MODE 0:BORDER 0:RESTORE 9100:FOR Z=0 TO 11:READ C:INK Z,C:NEXT
:INK 12,6,26:SPEED INK 3,3:PAPER 0:PEN 1:CLS
40 FOR Z=1 TO 12:PEN Z:LOCATE 6,12:PRINT"C R A S H":SOUND 1,Z*100,20:SOUND 2,z*2
00,20
50 IF SQ(1)<>4 THEN 50
60 NEXT:GOSUB 9500:PEN 1:MODE 1:RESTORE 9000:FOR Z=1 TO 24:READ f$:LOCATE 1,Z:PR
INT f$:NEXT:PT=0:VD=5
70 IF INKEY$="" THEN 70
80 MODE 1:GOSUB 8500:LOCATE 39,23:PRINT e$:LOCATE 39,24:PRINT e$
90 GOSUB 8900:GOSUB 8800:xx=2:yy=5:tp=22:AX=1:GOSUB 8510:' estancia 1
100 xs=2:ys=3:SS$="D":GOSUB 5000:GOSUB 8700
110 OB=1:GOSUB 1000
120 CLS:GOSUB 8500:LOCATE 39,10:PRINT E$:LOCATE 39,11:PRINT E$:GOSUB 8900:GOSUB
8800:XX=10:YY=19:TP=1:AX=-1:GOSUB 8510:XX=10:YY=19:T
P=16:AX=1:GOSUB 8510:XX=38:YY=12:TP=23:AX=-1:GOSUB 8510:XS=2:YS=23:SS$="D":GOSUB
 5000:GOSUB 8700:OB=4:GOSUB 1000
130 CLS:GOSUB 8500:LOCATE 39,10:PRINT E$:LOCATE 39,11:PRINT E$:GOSUB 8900:GOSUB
8800:XX=2:YY=12:TP=20:AX=1:GOSUB 8510:XX=38:TP=20:YY
=12:AX=-1:GOSUB 8510:XS=2:YS=10:SS$="D":GOSUB 5000:GOSUB 8700:OB=7:GOSUB 1000
140 CLS:GOSUB 8500:LOCATE 39,23:PRINT E$:LOCATE 39,24:PRINT E$:GOSUB 8900:GOSUB
8800:XX=2:YY=12:TP=20:AX=1:GOSUB 8510:FOR Y=20 TO 24
:LOCATE 5,Y:PRINT STRING$(29,172):NEXT:XX=34:YY=20:TP=39:AX=1:GOSUB 8510
150 XS=2:YS=10:SS$="D":GOSUB 5000:GOSUB 8700:OB=10:GOSUB 1000
160 CLS:GOSUB 8500:LOCATE 39,23:PRINT E$:LOCATE 39,24:PRINT E$:GOSUB 8900:GOSUB
8800:FOR XX=4 TO 37:IF RND<0.5 THEN LOCATE XX,24:PRI
NT LD$
170 NEXT:XS=2:YS=23:SS$="D":GOSUB 5000:GOSUB 8700:OB=13:GOSUB 1000
180 CLS:GOSUB 8500:LOCATE 39,22:PRINT "F":LOCATE 39,23:PRINT "I":LOCATE 39,24:PR
INT"N":GOSUB 8900:GOSUB 8800:XX=20:YY=10:TP=5:AX=-1:
GOSUB 8510:XX=20:YY=10:TP=35:AX=1:GOSUB 8510:XS=2:YS=23:SS$="D":GOSUB 5000:GOSUB
 8700:OB=16:FI=1:GOSUB 1000
```

```
999 GOTO 999
1000 L$=INKEY$:IF L$<>"" THEN L$=UPPER$(L$):GOSUB 7000:ELSE 1200
1010 IF L$="Q" AND T2=1 AND T1=0 AND ES=0 THEN GOSUB 5100:XS=XS-1:SS$="I":GOSUB
5000:GOTO 1100
1020 IF L$="W" AND T4=1 AND T3=0 AND ES=0 THEN GOSUB 5100:XS=XS+1:SS$="D":GOSUB
5000:GOTO 1100
1030 IF L$="A" AND T2=0 AND T1=0 AND ES=0 THEN GOSUB 5100:XS=XS-1:YS=YS+1:SS$="I
":GOSUB 5000 ELSE IF L$="A" AND T1=1 AND T5=0 AND ES
=0 THEN GOSUB 5100:XS=XS-1:YS=YS-1:SS$="I":GOSUB 5000
1035 IF L$="A" THEN 1100
1040 IF L$="S" AND T4=0 AND T3=0 AND ES=0 THEN GOSUB 5100:XS=XS+1:YS=YS+1:SS$="D
":GOSUB 5000 ELSE IF L$="S" AND T3=1 AND T6=0 AND ES
=0 THEN GOSUB 5100:XS=XS+1:YS=YS-1:SS$="D":GOSUB 5000
1045 IF L$="S" THEN 1100
1050 IF L$="O" AND ES=0 THEN GOSUB 7200:PRINT CHR$(22);CHR$(1):PEN 2:FOR Y=YS-1
TO TES STEP -1:LOCATE XS,Y:PRINT ES$:SOUND 1,1000,1:
SOUND 2,1500,1:NEXT:PRINT CHR$(22);CHR$(0):PEN 1:ES=1
1055 IF QES=1 THEN QES=0:ES=0
1060 IF L$="P" AND YS>3 AND ES=1 THEN E$=ES$:GOSUB 5100:E$=CHR$(32):YS=YS-1:GOSU
B 5000 ELSE IF L$="P" THEN GOSUB 5100:GOSUB 7300:GOS
UB 5000:ES=0
1100 K=0:FOR Z=1 TO 7:IF XS=XP(Z) AND (YS=YP(Z) OR YS+1=YP(Z)) THEN K=Z:Z=9
1110 NEXT:IF K<>0 THEN LOCATE XP(K),YP(K):PRINT E$:GOSUB 5000:KP(K)=0:YP(K)=0:PT
=PT+100:GOSUB 8800
1120 IF K<>0 AND ES=1 THEN GOSUB 5100:GOSUB 7300:GOSUB 5000:ES=0
1150 IF XS=39 THEN 3000
1200 PEN 3:IF XO=0 THEN XO=INT(RND*37+2):YO=4:O=INT(RND(TIME)*3+OB):IF XO=XP(1)
OR XO=XP(2) OR XO=XP(3) OR XO=XP(4) OR XO=XP(5) OR X
O=XP(6) OR XO=XP(7) THEN XO=0:GOTO 1200 ELSE LOCATE XO,YO:PRINT O$(O)
1210 LOCATE XO,YO:PRINT E$:YO=YO+2:T=TEST(XO*16-8,400-(YO*16-12)):IF T=1 AND XO<
>XS OR YO>24 THEN XO=0:GOTO 1000
1220 LOCATE XO,YO:PRINT O$(O):IF XO=XS AND (YO=YS OR YO=YS+1) THEN 2000
1230 PEN 1:GOTO 1000
2000 FOR Z=500 TO 1000 STEP 10:SOUND 1,Z,2:SOUND 2,Z+100,2:NEXT
2005 IF SQ(1)<>4 THEN 2005
2010 SOUND 1,1000,5
2015 VD=VD-1:IF VD<1 THEN 2100
2020 LOCATE 26,1:PRINT STRING$(13,32):GOSUB 8900:GOSUB 5000:XO=0:GOTO 1000
2100 LOCATE 7,12:PRINT"SE TE TERMINARON LAS VIDAS":FOR Z=1 TO 3000:NEXT
2110 CLS:PEN 1:LOCATE 3,5:PRINT"HAS OBTENIDO";PT;"PUNTOS":LOCATE 3,10:PRINT"PARA
 OTRA PARTIDA PULSA LA TECLA P":LOCATE 3,12:PRINT"PA
RA OTRO PROGRAMA PULSA LA TECLA F"
2120 L$=INKEY$:IF L$="" THEN 2120 ELSE L$=UPPER$(L$):IF L$="P" THEN RUN ELSE IF
L$="F" THEN 10000
2130 GOTO 2110
3000 XO=0:INK 1,26,6:FOR Z=300 TO 10 STEP -10:SOUND 1,Z,2:SOUND 2,Z+10,2:NEXT:IN
K 1,26:PEN 3
3010 IF SQ(1)<>4 THEN 3010
3015 IF FI<>0 THEN 3500
3020 LOCATE 1,25:PRINT"PASAMOS A LA SIGUIENTE ESTANCIA (S/N)"
3030 L$=INKEY$:IF L$="" THEN 3030 ELSE L$=UPPER$(L$):IF L$="N" THEN LOCATE 1,25:
PEN 1:PRINT STRING$(39,172):GOTO 1000
3040 IF L$="S" THEN RETURN
3050 GOTO 3030
3500 LOCATE 12,25:PRINT"FIN DE LA AVENTURA":FOR T=1 TO 3000:NEXT:GOTO 2110
5000 LOCATE xs,ys:IF ss$="D" THEN PRINT SD1$ ELSE PRINT SI1$
5010 LOCATE XS,YS+1:IF SS$="D" THEN PRINT SD2$ ELSE PRINT SI2$
5020 RETURN
```

```
5100 PEN 2:LOCATE xs,ys:PRINT E$:LOCATE XS,YS+1:PRINT E$:SOUND 1,100,1:PEN 1:RET
URN
7000 TX=XS-1:TY=YS+1:GOSUB 7100:T1=T:TY=YS+2:GOSUB 7100:T2=T:TX=XS+1:GOSUB 7100:
T4=T:TY=YS+1:GOSUB 7100:T3=T:TY=YS:GOSUB 7100:T6=T:T
X=XS-1:GOSUB 7100:T5=T:RETURN
7100 T=TEST(TX*16-8,400-(TY*16-12)):RETURN
7200 K=0:FOR Z=1 TO 7:IF XS=XP(Z) THEN K=Z:Z=9
7210 NEXT:IF Z=8 THEN TES=3 ELSE TES=YP(K)+1
7230 IF YS-YP(K)=1 THEN LOCATE XP(K),YP(K):PRINT E$:XP(K)=0:YP(K)=0:QES=1:PT=PT+
100:GOSUB 8800
7240 RETURN
7300 FOR Y=3 TO 25:IF TEST(XS*16-8,400-(Y*16-12))=1 THEN J=Y:Y=99
7310 NEXT:YS=J-2:RETURN
8500 PEN 1:LOCATE 1,2:PRINT STRING$(39,172):LOCATE 1,25:PRINT STRING$(39,172):FO
R y=2 TO 25:LOCATE 1,y:PRINT ld$:LOCATE 39,y:PRINT l
d$:NEXT:RETURN
8510 FOR y=yy TO 24:LOCATE xx,y:PRINT ld$:NEXT:yy=yy+1:xx=xx+AX:IF xx<>tp THEN 8
510 ELSE RETURN
8700 FOR Z=1 TO 7
8710 XP=INT(RND*37+2.5):YP=INT(RND*21+3.5):IF TEST(XP*16-8,400-((YP+1)*16-12))<>
0 THEN 8710
8715 FOR Y=1 TO Z:IF XP=XP(Y) THEN Y=99
8717 NEXT:IF Y=100 THEN 8710
8720 PEN 2:LOCATE XP,YP:PRINT PR$:XP(Z)=XP:YP(Z)=YP:NEXT:PEN 1:RETURN
8800 PEN 3:SOUND 1,10,10,15:SOUND 2,100,10:LOCATE 10,1:PRINT USING"####";pt:PEN
1:RETURN
8900 PEN 3:LOCATE 3,1:PRINT"PUNTOS:":LOCATE 20,1:PRINT"VIDAS:":FOR Z=1 TO VD:LOC
ATE 26+Z*2,1:PRINT SI1$:NEXT:PEN 1:RETURN
9000 DATA "                C R A S H",."  Es un iuego en el que hay que tener",ne
rvios de acero para sobrevivir..,"  El iuego esta di
vidido en 6 estancias",en las que debes recoger las perlas.,"  Como obstaculos t
endras todo tipo de"
9010 DATA obietos que caeran a gran velocidad,desde cualquier punto.,"  El movim
iento en horizontal se realiza",con las teclas Q (a
la izquierda) y W,(a la derecha); subir o baiar escalones,con las teclas A (a la
 izquierda) y S,(a la derecha).
9020 DATA"  Para subir a por las perlas debes",tender una escalera con la tecla
O y,subir por ella con la tecla P..,"  El iuego term
ina si recorres todas las",estancias o acabas con tus cinco vidas.,"      QUE TE
NGAS MUCHA SUERTE!!!",
9030 DATA "  PULSA CUALQUIER TECLA PARA COMENZAR"
9100 DATA 0,26,24,6,8,18,2,20,13,15,12,7
9500 SYMBOL 130,112,176,112,32,120,204,204,204:SYMBOL 131,220,120,48,48,48,48,11
2,240:SYMBOL 132,112,104,112,32,112,200,204,204:SYMB
OL 133,236,120,48,48,48,48,56,60:SI1$=CHR$(130):SI2$=CHR$(131):SD1$=CHR$(132):SD
2$=CHR$(133)
9510 SYMBOL 150,90,205,40,16,126,126,60,24:SYMBOL 151,149,149,86,100,126,126,60,
24:SYMBOL 152,36,90,36,36,126,126,60,24:SYMBOL 153,1
28,130,131,187,254,126,70,34:SYMBOL 154,0,0,0,58,127,127,168,112:SYMBOL 155,0,0,
0,0,48,123,255,72
9520 SYMBOL 156,0,0,0,255,255,126,60,60:SYMBOL 157,63,127,248,152,24,24,24,24:SY
MBOL 158,24,60,36,24,60,102,102,102:SYMBOL 159,1,1,5
7,69,255,137,249,255:SYMBOL 160,255,253,135,133,135,133,255,66:SYMBOL 161,0,0,25
5,171,213,171,213,255
9530 SYMBOL 162,0,0,0,0,0,3,252,112:SYMBOL 163,0,0,0,0,248,248,255,248:SYMBOL 16
4,254,127,127,126,60,60,126,126:SYMBOL 165,16,40,168
,254,239,40,40,16:SYMBOL 166,31,4,14,153,250,188,37,126:SYMBOL 167,60,126,126,12
6,36,36,24,24
```

```
9540 SYMBOL 170,147,84,165,40,139,100,33,149:EX$=CHR$(170):DIM O$(18):FOR Z=1 TO
 18:O$(Z)=CHR$(149+Z):NEXT
9550 SYMBOL 171,255,195,129,129,255,195,129,129:SYMBOL 172,127,127,127,0,247,247
,247,0:SYMBOL 173,66,36,24,231,24,36,66,0:es$=CHR$(1
71):ld$=CHR$(172):pr$=CHR$(173):e$=CHR$(32):RETURN
10000 BORDER 1:INK 0,1:PAPER 0:PEN 1:CLS:PRINT"PREPARADO PARA EL SIGUIENTE PROGR
AMA":RUN""
```



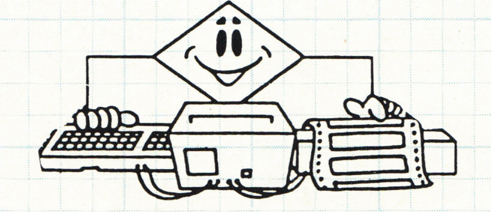


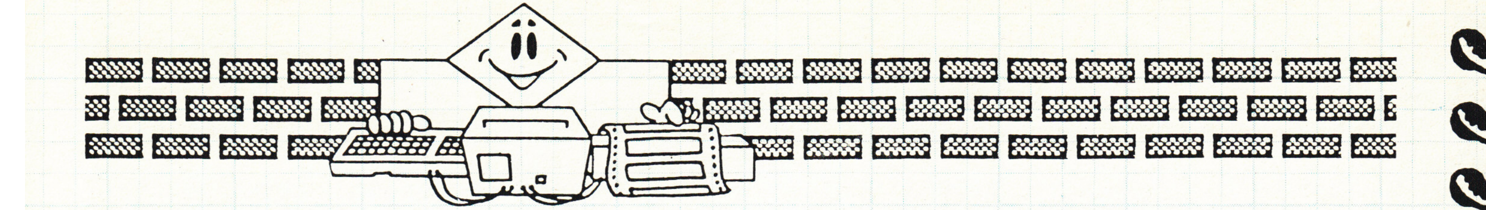
BIO-RITMOS

```
2 INK 0,1:INK 1,24:INK 2,6:INK 3,26:PAPER 0:PEN 1:MODE 1
10 CLS:RESTORE 10100:FOR I=1 TO 16:READ X$:LOCATE 1,I:PRINT X$:NEXT I
12 X$=INKEY$:IF X$="" THEN 12 ELSE CLS
50 RESTORE 10000:DIM M(12),M$(11):FOR I=1 TO 12:READ X:M(I)=X:NEXT I:FOR I=0 TO
11:READ X$:M$(I)=X$:NEXT I
100 SYMBOL AFTER 220
102 SYMBOL 220,0,224,156,208,152,144,28,0
104 SYMBOL 221,0,224,156,200,136,136,28,0
106 SYMBOL 222,0,224,156,200,136,232,28,0
108 SYMBOL 223,224,128,220,144,248,80,80,224
110 MODE 1:INPUT"Fecha de nacimiento (xx-xx-xxxx):        ";n$
112 IF LEN(N$)<>10 THEN 110
114 DN=VAL(LEFT$(N$,2)):MN=VAL(MID$(N$,4,2)):AN=VAL(RIGHT$(N$,4))
116 INPUT"Fecha actual (xx-xx-xxxx):               ";a$
118 IF LEN(A$)<>10 THEN 116
120 da=VAL(LEFT$(a$,2)):Ma=VAL(MID$(a$,4,2)):Aa=VAL(RIGHT$(a$,4))
122 CLS:LOCATE 1,4:PRINT"FECHA DE NACIMIENTO: ";N$:LOCATE 1,7:PRINT"FECHA ACTUAL
: ";A$:LOCATE 10,10:PRINT"CONFORME (S/N)"
124 X$=INKEY$:IF X$="" THEN 124 ELSE IF X$="N" OR X$="n" THEN 110 ELSE IF X$="S"
 OR X$="s" THEN 130 ELSE 124
130 CLS:LOCATE 18,1:PRINT"MENU":LOCATE 2,6:PRINT"1:BIORRITMOS DEL MES":LOCATE 2,
8:PRINT"2:BIORRITMOS MES PROXIMO":LOCATE 2,10:PRINT"
3:BIORRITMOS LARGO ALCANCE":LOCATE 2,12:PRINT"4:CAMBIAR FECHAS":LOCATE 2,14:PRIN
T"5:FINALIZAR"
140 X$=INKEY$:IF X$="" THEN 140 ELSE IF X$="1" THEN 500 ELSE IF X$="2" THEN 550
ELSE IF X$="3" THEN 200 ELSE IF X$="4" THEN 110 ELSE
 IF X$="5" THEN 5000 ELSE 140
200 X1=AN:X2=MN:X3=DN:Y1=AA:Y2=MA:Y3=1:GOSUB 1000:GOTO 2000
400 CLS:LOCATE 1,10:PRINT"  Los graficos permaneceran en pantalla          hasta
que pulses tecla"
415 x$=INKEY$:IF x$="" THEN 415 ELSE RETURN
500 GOSUB 400:x1=an:x2=mn:x3=dn:y1=aa:y2=ma:y3=1:GOSUB 1000:GOTO 650
550 GOSUB 400:x1=an:x2=mn:x3=dn:y3=1:IF ma=12 THEN y1=aa+1:y2=1
552 IF ma<12 THEN y1=aa:y2=ma+1
554 GOSUB 1000:GOTO 650
600 CLS:RESTORE 10010:FOR i=1 TO 16:READ x$:LOCATE 35,i:PRINT x$:NEXT i
601 FOR i=1 TO 19:LOCATE 3,i:PRINT CHR$(149):NEXT i:n$=CHR$(154)+CHR$(154)+CHR$(
154)+CHR$(154)+CHR$(159):LOCATE 3,20:PRINT CHR$(147)
;n$;n$;n$;n$;n$;MID$(n$,1,3)
602 LOCATE 2,1:PRINT "1";CHR$(159):LOCATE 2,10:PRINT "0";CHR$(159):LOCATE 1,19:P
RINT "-1";CHR$(159):LOCATE 8,21:PRINT "5     10    15
  20    25":LOCATE 2,22:PRINT M$(Y2-1);Y1
604 IF Y2=2 AND Y1\4=Y1/4 THEN LOCATE 32,20:PRINT CHR$(154)
```

```
606 IF M(Y2)>=30 THEN LOCATE 32,20:PRINT MID$(N$,4,2):LOCATE 33,21:PRINT "30"
608 IF M(Y2)=31 THEN LOCATE 34,20:PRINT CHR$(154)
610 RETURN
650 GOSUB 600:ND=M(Y2):IF Y2=2 AND Y1/4=Y1\4 THEN ND=ND+1
655 FOR I=DIAS TO DIAS+ND-1:X=I-DIAS+4:Y4=9.7-9*SIN(2*3.14159*i/23):y5=9.7-9*SIN
(2*3.14159*i/28):y6=9.7-9*SIN(2*3.14159*i/33)
670 LOCATE x,y4:PRINT "F":LOCATE X,Y5:PRINT "E":LOCATE X,Y6:PRINT "I"
672 IF INT(Y4)=INT(Y5) THEN LOCATE X,Y5:PRINT CHR$(220)
674 IF INT(Y4)=INT(Y6) THEN LOCATE X,Y6:PRINT CHR$(221)
675 IF INT(Y5)=INT(Y6) THEN LOCATE X,Y6:PRINT CHR$(222)
677 IF INT(Y4)=INT(Y5) AND INT(Y4)=INT(Y6) THEN LOCATE X,Y5:PRINT CHR$(223)
679 NEXT I
700 x$=INKEY$:IF x$="" THEN 700 ELSE CLS:GOSUB 601
705 LOCATE 2,1:PRINT"3":LOCATE 1,19:PRINT"-3"
708 x$="SUMA DE BIORRITMOS":FOR I=2 TO 19:LOCATE 38,I:PRINT MID$(X$,I-1,1):NEXT
I
710 FOR I=DIAS TO DIAS+ND-1:X=I-DIAS+4:Y4=SIN(2*3.14159*i/23):y5=SIN(2*3.14159*i
/28):y6=SIN(2*3.14159*i/33)
712 PEN 2:Z=INT((Y4+Y5+Y6+3)*3):FOR J=19 TO 19-Z STEP -1:LOCATE X,J:PRINT CHR$(1
43):NEXT J:NEXT I:PEN 1
750 X$=INKEY$:IF X$="" THEN 750 ELSE 130
1000 DIAS=0:IF Y1-X1=1 THEN 1025 ELSE IF X1=Y1 THEN 1300
1005 FOR I=X1+1 TO Y1-1:DIAS=DIAS+365
1010 IF I/4=I\4 THEN DIAS=DIAS+1
1020 NEXT I
1025 IF X2=12 THEN 1055
1030 FOR I=X2+1 TO 12:DIAS=DIAS+M(I)
1040 IF I=2 AND X1/4=X1\4 THEN DIAS=DIAS+1
1050 NEXT I
1055 IF Y2=1 THEN 1090
1060 FOR I=1 TO Y2-1:DIAS=DIAS+1
1070 IF I=2 AND Y1/4=Y1\4 THEN DIAS=DIAS+1
1080 NEXT I
1090 DIAS=DIAS+M(X2)-X3:IF X2=2 AND X1/4=X1\4 THEN DIAS=DIAS+1
1200 DIAS=DIAS+Y3:RETURN
1300 FOR I=X2+1 TO Y2-1:DIAS=DIAS+M(I):IF I=2 AND X1/4=X1\4 THEN DIAS=DIAS+1
1305 NEXT i
1310 GOTO 1090
2000 GOSUB 400:CLS:PLOT 32,398,1:DRAW 32,170:DRAW 639,170:PLOT 32,340:DRAW 639,3
40
2002 LOCATE 2,1:PRINT"1":LOCATE 2,4:PRINT"0":LOCATE 1,7:PRINT"-1"
2005 m=38:i=ma-1:FOR i=0 TO 9:i=i+1:IF i=13 THEN i=1
2006 m=m+2*m(i):PLOT m,168:PLOT m,166:LOCATE m\16-3,16:PRINT i:NEXT i
2010 PEN 2:LOCATE 1,18:PRINT "ROJO: ESTADO FISICO":PEN 3:LOCATE 1,20:PRINT "BLAN
CO: ESTADO EMOTIVO":LOCATE 1,24:PRINT "ABAJO: SUMA B
IORRITMOS":PEN 1:LOCATE 1,22:PRINT"AMARILLO: ESTADO INTELECTUAL"
2050 FOR I=DIAS TO DIAS+300:X=(I-DIAS)*2+34:Y4=SIN(2*3.14159*I/23):Y5=SIN(2*3.14
159*I/28):Y6=SIN(2*3.14159*I/33):Z=(Y4+Y5+Y6+3)*16
2060 PLOT X,340+(Y4*40),2:PLOT X,340+(Y5*40),3:PLOT X,340+(Y6*40),1
2065 PLOT X,174,3:DRAW X,174+Z
2070 NEXT I
2100 x$=INKEY$:IF x$="" THEN 2100 ELSE 130
5000 CLS:RUN"
10000 DATA 31,28,31,30,31,30,31,31,30,31,30,31
```

```
10002 DATA "ENERO","FEBRERO","MARZO","ABRIL","MAYO","JUNIO","JULIO","AGOSTO","SE
PTIEMBRE","OCTUBRE","NOVIEMBRE","DICIEMBRE"
10010 DATA "I F E",,"I E E","N S S","T T T","E A A","L D D","I O O","G","E F E",
"N I M","C S O","I I T","A C I","  O V","     O"
10100 DATA "                 BIORRITMOS",," Con el presente programa podras calcu-",
"lar los biorritmos, asi como su suma."," Primero ha
s de introducir la fecha de","tu nacimiento (de la forma: 09-08-1964)"
10101 DATA "y a continuacion la fecha actual.",," La opcion 1 calcula los biorri
tmos del","mes, la 2 los del mes proximo y la 3 los"
,"de los proximos 10 meses.",,,,,"       PULSA TECLA PARA COMENZAR"
```





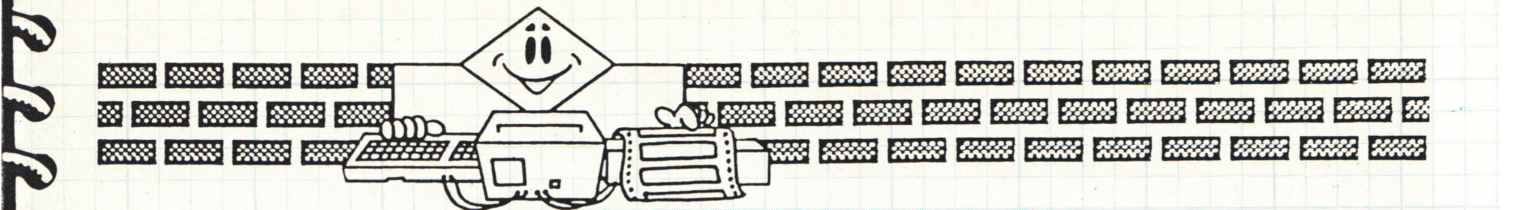
CIRCUITOS ELECTRICOS

```
10 '    << CIRCUITOS ELECTRICOS >>
20 ' COPYRIGHT M.J.C. & F.A.P. 1985.
30 BORDER 1:MODE 0:INK 0,1:INK 1,26,6:SPEED INK 5,5:INK 2,24:INK 3,6:PAPER 0:PEN
 1:CLS:LOCATE 6,8:PRINT"CIRCUITOS":LOCATE 5,14:PRINT
"ELECTRICOS":FOR T=1 TO 2000:NEXT:INK 1,26:MODE 1
40 GOSUB 9100:RESTORE 9000:FOR Z=1 TO 25:READ E$:LOCATE 1,Z:PRINT E$:SOUND 1,100
,2:NEXT:SOUND 1,200,5:GOSUB 9110
50 IF INKEY$="" THEN 50
60 MODE 0:INK 4,8:INK 5,18:INK 6,2:INK 7,20:INK 8,13:INK 9,15:INK 10,12:INK 11,7
:PEN 1:CLS
65 DIM A(24,2),C(25),E(25)
70 LOCATE 2,1:PRINT"CIRCUITO ELECTRICO"
80 PEN 2:FOR Y=3 TO 18 STEP 5:FOR X=2 TO 17:LOCATE X,Y:PRINT CH$:NEXT:NEXT
90 FOR X=2 TO 17 STEP 15:FOR Y=3 TO 18:LOCATE X,Y:PRINT CV$:NEXT:NEXT
100 PEN 9:CC=65:FOR Y=3 TO 18 STEP 5:FOR X=2 TO 17 STEP 5:LOCATE X,Y:PRINT CHR$(
CC):CC=CC+1:NEXT:NEXT
110 p1$="N":s1$="O":p1=78:s1=79
180 GOSUB 9200:GOSUB 2000:IF K=100 THEN 150 ELSE E(S)=5:NP=S:GOSUB 3000
190 LOCATE 1,24:INPUT"CUANTAS BOMBILLAS";NB
200 GOSUB 9200:IF NB<0 OR NB>12 OR NB<>INT(NB) THEN 190
210 GOSUB 9200
220 FOR Z=1 TO NB
230 LOCATE 1,24:INPUT"DESDE LETRA ";PL$:PL$=UPPER$(PL$):PL=ASC(PL$):IF PL<65 OR
PL>80 OR LEN(PL$)>1 THEN GOSUB 9200:GOTO 230
240 LOCATE 1,25:INPUT"HASTA LETRA ";SL$:SL$=UPPER$(SL$):SL=ASC(SL$):IF SL<65 OR
SL>80 OR LEN(SL$)>1 OR PL>SL THEN GOSUB 9200:GOTO 23
0
250 GOSUB 9200:GOSUB 2000:IF K=100 THEN 230 ELSE E(S)=1:GOSUB 3100:NEXT
260 LOCATE 1,24:INPUT"CUANTOS TIMBRES";NT
270 GOSUB 9200:IF NT<0 OR NT>12 OR NT<>INT(NT) THEN 260
280 GOSUB 9200
290 FOR Z=1 TO NT
300 LOCATE 1,24:INPUT"DESDE LETRA ";PL$:PL$=UPPER$(PL$):PL=ASC(PL$):IF PL<65 OR
PL>80 OR LEN(PL$)>1 THEN GOSUB 9200:GOTO 300
310 LOCATE 1,25:INPUT"HASTA LETRA ";SL$:SL$=UPPER$(SL$):SL=ASC(SL$):IF SL<65 OR
SL>80 OR LEN(SL$)>1 OR PL>SL THEN GOSUB 9200:GOTO 30
0
320 GOSUB 9200:GOSUB 2000:IF K=100 THEN 300 ELSE E(S)=2:GOSUB 3200:NEXT
330 LOCATE 1,24:PRINT"CUANTOS":INPUT"INTERRUPTORES";NI
340 GOSUB 9200:IF NI<0 OR NI>12 OR NI<>INT(NI) THEN 330
350 GOSUB 9200
360 FOR Z=1 TO NI
370 LOCATE 1,24:INPUT"DESDE LETRA ";PL$:PL$=UPPER$(PL$):PL=ASC(PL$):IF PL<65 OR
PL>80 OR LEN(PL$)>1 THEN GOSUB 9200:GOTO 370
```

```
380 LOCATE 1,25:INPUT"HASTA LETRA ";SL$:SL$=UPPER$(SL$):SL=ASC(SL$):IF SL<65 OR
SL>80 OR LEN(SL$)>1 OR PL>SL THEN GOSUB 9200:GOTO 37
0
390 GOSUB 9200:GOSUB 2000:IF K=100 THEN 370 ELSE E(S)=3:GOSUB 3300
400 NEXT:PEN 2:RESTORE 9400:FOR Y=3 TO 18 STEP 5:FOR X=2 TO 17 STEP 5:READ A:LOC
ATE X,Y:PRINT CHR$(A):NEXT:NEXT
410 GOSUB 2500
420 L$=INKEY$:IF L$="" THEN 420
430 L$=UPPER$(L$):SOUND 1,10,3
440 IF L$="A" THEN 10000
450 IF L$="O" THEN ERASE A,C,E:GOTO 60
460 IF L$="F" THEN 4000
470 IF L$="I" THEN 5000
480 GOTO 420
2000 IF PL<69 THEN R=64:YY=2 ELSE IF PL<73 THEN R=68:YY=7 ELSE IF PL<77 THEN R=7
2:YY=12 ELSE R=76:YY=17
2010 XX=(PL-R)*5-1:IF ABS(PL-SL)<>1 THEN XX=XX-2:YY=YY+3
2020 S=(XX+1)/5:IF YY=2 THEN S=S ELSE IF YY=7 THEN S=S+3 ELSE IF YY=12 THEN S=S+
6 ELSE IF YY=17 THEN S=S+9 ELSE 2040
2030 GOTO 2045
2040 S=(XX+3)/5+12:IF YY=10 THEN S=S+4 ELSE IF YY=15 THEN S=S+8
2045 IF S=14 OR S=15 OR S=18 OR S=19 OR S=22 OR S=23 THEN K=100:GOTO 2070
2050 K=0:IF A(S,1)<>0 AND A(S,2)<>0 THEN K=100
2060 IF K=100 THEN 2070 ELSE A(S,1)=XX:A(S,2)=YY
2070 RETURN
2500 PEN 2:LOCATE 1,21:PRINT"F PONER EN MARCHA":LOCATE 1,22:PRINT"I ABRIR/CERRAR
":LOCATE 3,23:PRINT"INTERRUPTORES":LOCATE 1,24:PRINT
"O OTRO CIRCUITO":LOCATE 1,25:PRINT"A ABANDONAR":RETURN
2510 FOR Z=20 TO 25:LOCATE 1,Z:PRINT STRING$(19,32):NEXT:RETURN
3000 SOUND 1,100,5:PEN 6:LOCATE A(S,1),A(S,2)+1:PRINT P1$:LOCATE A(S,1),A(S,2)+2
:PRINT P2$:PEN 1:RETURN
3045 IF S=14 OR S=15 OR S=18 OR S=19 OR S=22 OR S=23 THEN 2070
3100 PEN 8:LOCATE A(S,1),A(S,2):PRINT BA$:PEN 11:LOCATE A(S,1),A(S,2)+1:PRINT B$
:PEN 1:RETURN
3150 PEN 1:LOCATE A(S,1),A(S,2):PRINT BE$:PEN 11:LOCATE A(S,1),A(S,2)+1:PRINT B$
:PEN 1:RETURN
3200 PEN 4:LOCATE A(S,1),A(S,2):PRINT TA$:PEN 5:LOCATE A(S,1),A(S,2)+1:PRINT T$:
PEN 1:RETURN
3250 PEN 7:SOUND 1,10,1:LOCATE A(S,1),A(S,2):PRINT TE$:PEN 5:SOUND 1,10,1:LOCATE
 A(S,1),A(S,2)+1:PRINT T$:PEN 1:RETURN
3300 PEN 3:LOCATE A(S,1),A(S,2)+1:IF S<13 THEN PRINT IH$:LOCATE A(S,1)-1,A(S,2):
PRINT S ELSE PRINT IV$:LOCATE A(S,1)+1,A(S,2)+1:PRIN
T RIGHT$(STR$(S),ABS(S>9)+1)
3310 PEN 1:RETURN
3350 PEN 3:LOCATE A(S,1),A(S,2)+1:IF S<13 THEN PRINT CH$ ELSE PRINT CV$
3360 PEN 1:RETURN
4000 GOSUB 2510:LOCATE 1,24:PRINT"PULSA N PARA PARAR":LOCATE 5,25:PRINT"EL CIRCU
ITO"
4005 IF E(21)=3 OR E(10)=3 OR E(12)=3 OR E(24)=3 THEN RESTORE 9700:FOR Z=1 TO 18
:READ X:C(X)=0:NEXT:GOTO 4070
4010 IF E(17)=3 OR E(20)=3 THEN RESTORE 9710:FOR Z=1 TO 10:READ X:C(X)=0:NEXT:GO
TO 4030
4015 IF E(13)=3 OR E(1)=3 OR E(2)=3 OR E(3)=3 OR E(16)=3 THEN T=0 ELSE T=1
4017 RESTORE 9720:FOR Z=1 TO 5:READ X:C(X)=T:NEXT
4020 IF E(4)=3 OR E(5)=3 OR E(6)=3 THEN T=0 ELSE T=1
4022 FOR Z=4 TO 6:C(Z)=T:NEXT
4025 IF C(1)=0 AND C(4)=0 THEN T=0 ELSE T=1
4027 C(17)=T:C(20)=T
```

```
4030 IF E(7)=3 OR E(8)=3 OR E(9)=3 THEN T=0 ELSE T=1
4033 FOR Z=7 TO 9:C(Z)=T:NEXT
4040 IF C(17)=1 OR C(7)=1 THEN T=1 ELSE T=0
4050 RESTORE 9730:FOR Z=1 TO 4:READ X:C(X)=T:NEXT
4070 L$=INKEY$:IF L$="N" OR L$="n" THEN 4200
4080 RESTORE 9700:FOR Z=1 TO 18:READ S
4090 IF C(S)=0 THEN 4130
4100 IF E(S)=1 THEN GOSUB 3150
4120 IF E(S)=2 THEN GOSUB 3250:SOUND 1,100,5,15:GOSUB 3200
4130 NEXT
4140 GOTO 4070
4200 RESTORE 9700:FOR Z=1 TO 18:READ S:C(S)=0:IF E(S)=1 THEN GOSUB 3100 ELSE IF
E(S)=2 THEN GOSUB 3200
4210 NEXT:GOSUB 2510:GOSUB 2500:GOTO 420
5000 PEN 2:GOSUB 2510:LOCATE 1,24:INPUT"QUE INTERRUPTOR";IN:IF IN<0 OR IN>24 OR
IN<>INT(IN) THEN GOSUB 2500:GOTO 420
5010 S=IN:IF E(S)=3 THEN GOSUB 3350:E(S)=4 ELSE IF E(S)=4 THEN GOSUB 3300:E(S)=3

5020 GOSUB 9200:GOSUB 2500:GOTO 420
9000 DATA "      CIRCUITOS ELECTRICOS EN SERIE",,,,"  Con este programa podras di
se@ar,a tu","gusto, circuitos electricos en los que"
,se combinan distintos componentes como,"son: PILAS, BOMBILLAS, TIMBRES E",INTER
RUPTORES.
9010 DATA ,,"  Todos estos componentes podran ir",colocados en una parrilla con
24 posi-,ciones distintas.,,"  El objetivo del progr
ama es que por",medio del juego se puedan aprender las,bases del funcionamiento
de la electri-,cidad.
9020 DATA ,,"  Si quieres abandonar el programa a",medias pulsa la tecla A.,,"
 PULSA UNA TECLA PARA CONTINUAR"
9100 SYMBOL AFTER 32:SYMBOL 64,118,216,0,216,102,102,102,0:RETURN
9110 SYMBOL 190,7,24,35,36,34,17,9,9:SYMBOL 191,224,24,196,36,68,136,144,144:SYM
BOL 192,31,15,7,15,3,7,1,1:SYMBOL 193,248,240,224,24
0,192,224,128,128:SYMBOL 194,7,31,63,63,63,31,15,15:SYMBOL 195,224,184,220,220,2
20,184,240,240
9120 SYMBOL 196,7,7,7,7,7,7,15,15:SYMBOL 197,224,224,224,224,224,224,240,240:SYM
BOL 198,3,12,17,33,32,17,14,7:SYMBOL 199,240,56,204,
198,134,12,56,240:SYMBOL 200,35,76,147,162,160,145,78,39:SYMBOL 201,244,58,173,2
30,134,13,58,244
9130 SYMBOL 202,12,28,48,227,195,0,0,0:SYMBOL 203,24,24,192,192,96,48,24,24:SYMB
OL 204,0,0,0,232,208,32,127,125:SYMBOL 205,121,125,1
25,127,125,126,127,127:SYMBOL 206,0,64,32,23,11,4,254,62:SYMBOL 207,222,190,30,2
54,222,190,126,254
9140 B$=CHR$(192)+CHR$(193):BA$=CHR$(190)+CHR$(191):BE$=CHR$(194)+CHR$(195):T$=C
HR$(196)+CHR$(197):TA$=CHR$(198)+CHR$(199):TE$=CHR$(
200)+CHR$(201):IH$=CHR$(202):IV$=CHR$(203):P1$=CHR$(204)+CHR$(206): P2$=CHR$(205
)+CHR$(207):E$=CHR$(32):EE$=E$+E$
9150 CV$=CHR$(149):CH$=CHR$(154):VD$=CHR$(151):VI$=CHR$(157):HB$=CHR$(158):HS$=C
HR$(155):CR$=CHR$(159):SD$=CHR$(150):SI$=CHR$(156):B
I$=CHR$(153):BD$=CHR$(147):RETURN
9200 LOCATE 1,24:PRINT STRING$(20,32):LOCATE 1,25:PRINT STRING$(19,32):RETURN
9400 DATA 150,154,154,156,151,154,154,157,151,154,154,157,147,154,154,153
9700 DATA 1,2,3,4,5,6,7,8,9,10,11,12,13,16,17,20,21,24
9710 DATA 17,13,1,2,3,4,5,6,16,20
9720 DATA 13,1,2,3,16
9730 DATA 21,10,12,24
10000 MODE 1:PEN 1:CLS:SYMBOL AFTER 31:PRINT"PREPARADO PARA EL SIGUIENTE PROGRAM
A":RUN""
```

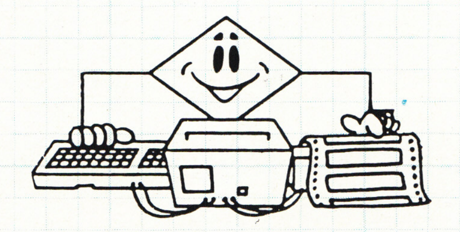


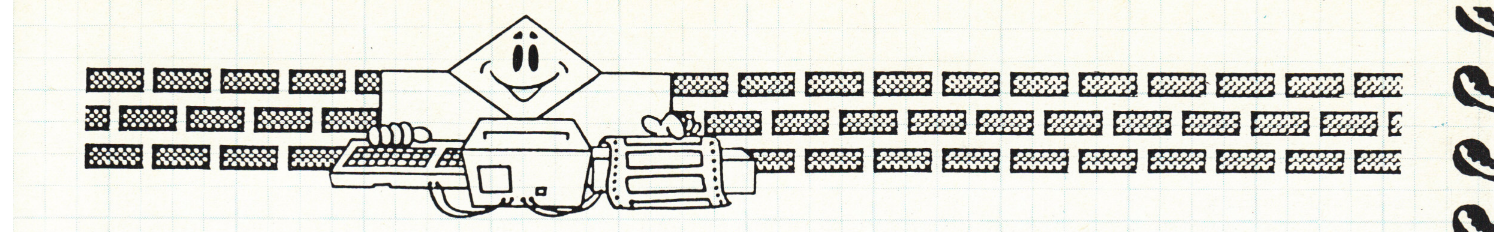
DADOS-21

```
4 INK 0,1:INK 1,24:INK 2,6:INK 3,26:INK 6,18,6:PEN 1:PAPER 0:BORDER 1:CLS
5 ENV 1,10,4,3,8,-4,3,3,-1,10,6,5,2,4,-5,3
10 MODE 1:RESTORE 10100:FOR I=1 TO 17:READ X$:LOCATE 1,I:PRINT X$:NEXT I
12 X$=INKEY$:IF X$="" THEN 12
20 MODE 0:SYMBOL 250,255,255,240,248,220,206,199,195:SYMBOL 251,255,255,15,31,59
,115,227,195:SYMBOL 252,195,199,206,220,248,240,255,
255:SYMBOL 253,195,227,115,59,31,15,255,255
22 WINDOW #1,1,10,2,18:WINDOW #2,1,20,20,24:PAPER #1,0:WINDOW #3,13,20,14,19:PEN
 #1,1:PAPER #2,3:PEN #2,2:CLS#1:PAPER #3,0
100 CLS:INPUT "Cual es tu nombre ";n$
102 IF LEN(n$)>9 THEN 100 ELSE CLS
103 PEN 2:LOCATE 12,4:PRINT N$:LOCATE 12,6:PRINT 0:LOCATE 12,8:PRINT"AMSTRAD":LO
CATE 12,10:PRINT 0
104 su=0:x=RND:IF x<0.5 THEN am=0:GOTO 3000
106 am=1:GOTO 2000
200 SOUND 1,956,30,7,,,1:SOUND 1,38,40,6:IF cs=1 THEN RESTORE 8000
202 IF cs=2 THEN RESTORE 8002
204 IF cs=3 THEN RESTORE 8004
206 IF cs=4 THEN RESTORE 8006
208 IF cs=5 THEN RESTORE 8008
210 IF cs=6 THEN RESTORE 8010
211 FOR i=0 TO 5:READ x$:d$(i)=x$:NEXT i
212 LOCATE #1,2,2:PRINT #1,"SUMA:";su:LOCATE #1,2,4:PRINT #1,CHR$(250);:FOR i=1
TO 7:PRINT #1,CHR$(208);:NEXT i:PRINT #1,CHR$(251)
214 LOCATE #1,2,5:PRINT #1,CHR$(211);CHR$(205);"  ";d$(0);"  ";CHR$(204);CHR$(20
9)
216 LOCATE #1,2,6:PRINT #1,CHR$(211);" ";CHR$(205);"   ";CHR$(204);" ";CHR$(209)
218 LOCATE #1,2,7:PRINT #1,CHR$(211);"  ";CHR$(135);CHR$(131);CHR$(139);"  ";CHR
$(209)
220 LOCATE #1,2,8:PRINT #1,CHR$(211);d$(1);" ";CHR$(133);d$(2);CHR$(138);" ";d$(
3);CHR$(209)
222 LOCATE #1,2,9:PRINT #1,CHR$(211);"  ";CHR$(141);CHR$(140);CHR$(142);"  ";CHR
$(209)
224 LOCATE #1,2,10:PRINT #1,CHR$(211);" ";CHR$(204);"   ";CHR$(205);" ";CHR$(209
)
226 LOCATE #1,2,11:PRINT #1,CHR$(211);CHR$(204);"  ";d$(4);"  ";CHR$(205);CHR$(2
09)
228 LOCATE #1,2,12:PRINT #1,CHR$(252);:FOR i=1 TO 7:PRINT #1,CHR$(210);:NEXT i:P
RINT #1,CHR$(253)
230 LOCATE #1,5,15:PRINT #1,CHR$(150);CHR$(154);CHR$(156)
232 LOCATE #1,5,16:PRINT #1,CHR$(149);d$(5);CHR$(149)
```

```
234 LOCATE #1,5,17:PRINT #1,CHR$(147);CHR$(154);CHR$(153)
236 RETURN
300 CLS#2:LOCATE #2,4,3:PRINT#2,"COJO LA CARA:";CE:FOR I=1 TO 3000:NEXT I:RETURN
400 IF su<21 THEN GOTO 3000
410 IF su=21 THEN ga=ga+1:LOCATE 12,10:PRINT ga:x$="PERDISTE":GOTO 550
420 IF SU>21 THEN gu=gu+1:LOCATE 12,6:PRINT gu:x$="GANASTE":GOTO 550
500 IF su<21 THEN GOTO 2000
510 IF su>21 THEN ga=ga+1:LOCATE 12,10:PRINT ga:x$="PERDISTE":GOTO 550
520 IF SU=21 THEN gu=gu+1:LOCATE 12,6:PRINT gu:x$="GANASTE":GOTO 550
550 PEN #3,6:FOR I=1 TO 6:LOCATE #3,1,I:PRINT#3,X$:NEXT I:RESTORE 10000:FOR I=1
TO 16:READ J:SOUND 1,J,25,7,1,,1:NEXT I:FOR I=1 TO 1
500:NEXT
560 PEN #3,3:CLS #3:LOCATE #3,1,2:PRINT #3,"1:OTRA":LOCATE #3,1,5:PRINT #3,"2:FI
N"
562 D$=INKEY$:IF D$="1" THEN 570 ELSE IF D$="2" THEN 5000 ELSE 562
570 CLS #3:SU=0:IF AM=1 THEN AM=0:GOTO 2999
572 IF AM=0 THEN AM=1:GOTO 2000
600 CLS #2:IF CS=1 OR CS=6 THEN X$="2  3  4  5" ELSE IF CS=2 OR CS=5 THEN X$="1
 3  4  6" ELSE X$="1  2  5  6"
602 LOCATE#2,4,2:PRINT#2,"QUE CARA COJES":LOCATE#2,6,4:PRINT#2,X$
610 D$=INKEY$:IF D$="" THEN 610 ELSE IF D$<>MID$(X$,1,1) AND D$<>MID$(X$,4,1) AN
D D$<>MID$(X$,7,1) AND D$<>MID$(X$,10,1) THEN 610
612 ce=VAL(d$):RETURN
1000 IF cs=1 OR cs=6 THEN ce=2 ELSE ce=1
1004 RETURN
1010 IF cs=2 OR cs=5 THEN ce=1 ELSE ce=2
1014 RETURN
1020 IF cs=3 OR cs=4 THEN ce=1 ELSE ce=3
1024 RETURN
1030 IF cs=3 OR cs=4 THEN ce=2 ELSE ce=4
1034 RETURN
1040 IF cs=2 OR cs=5 THEN ce=2 ELSE ce=5
1044 RETURN
1050 IF cs=1 OR cs=6 THEN ce=3 ELSE ce=6
1054 RETURN
1060 IF cs=2 OR cs=5 THEN ce=3 ELSE ce=2
1064 RETURN
1070 IF cs=3 OR cs=4 THEN ce=1 ELSE ce=4
1074 RETURN
1080 IF cs=1 OR cs=6 THEN ce=2 ELSE ce=1
1084 RETURN
1090 IF cs=2 OR cs=5 THEN ce=1 ELSE ce=5
1094 RETURN
1100 IF cs=2 OR cs=5 THEN ce=3 ELSE ce=2
1104 RETURN
1110 IF cs=3 OR cs=4 THEN ce=1 ELSE ce=3
1114 RETURN
1120 IF cs=3 OR cs=4 THEN ce=1 ELSE ce=4
1124 RETURN
1130 IF cs=2 OR cs=5 THEN ce=1 ELSE ce=5
1134 RETURN
1140 IF cs=1 OR cs=6 THEN ce=3 ELSE ce=6
1144 RETURN
1150 IF cs=2 OR cs=5 THEN ce=3 ELSE ce=2
1154 RETURN
1160 IF cs=1 OR cs=2 THEN ce=4 ELSE ce=1
1164 RETURN
1170 IF cs=1 THEN ce=24 ELSE ce=1
1174 RETURN
```

```
1180 ce=1:RETURN
1190 ce=2:RETURN
2000 CLS #1:IF su<>0 THEN 2100
2010 x=RND:IF x>0.5 THEN ce=3 ELSE ce=4
2020 GOTO 2110
2100 ON SU GOSUB 1190,1180,1170,1160,1150,1140,1130,1120,1110,1100,1090,1080,107
0,1060,1050,1040,1030,1020,1010,1000
2110 cs=ce:su=su+cs:GOSUB 200:GOSUB 300:GOTO 400
2999 CLS #1
3000 IF su<>0 THEN 3100
3010 CLS #2:LOCATE #2,4,2:PRINT#2,"QUE CARA COJES":LOCATE #2,3,4:PRINT #2,"1   2
 3   4   5   6"
3012 x$=INKEY$:IF x$<"1" OR x$>"6" THEN 3012 ELSE ce=VAL(x$):GOTO 3110
3100 GOSUB 600:CLS #1:CLS #2
3110 cs=ce:su=su+cs:GOSUB 200:FOR I=1 TO 2000:NEXT I:GOTO 500
5000 MODE 1:RUN"
8000 DATA "3","2","1","5","4","6"
8002 DATA "3","6","2","1","4","5"
8004 DATA "6","2","3","5","1","4"
8006 DATA "1","2","4","5","6","3"
8008 DATA "4","6","5","1","3","2"
8010 DATA "4","2","6","5","3","1"
10000 DATA 358,319,284,284,284,253,284,358,426,426,379,358,358,379,426,379
10100 DATA "                    DADO 21",," El objetivo del presente juego es sumar"
,"21 puntos con el dado que aparece en la","pantalla
, por turno se ha de ir voltean-","do el dado sobre una de las cuatro caras"
10101 DATA"laterales sumandose la nueva cara supe-","rior.",," El que logre suma
r 21 gana, el que se","pase de 21 pierde.",,,,,,"
   PULSA TECLA PARA COMENZAR"
```

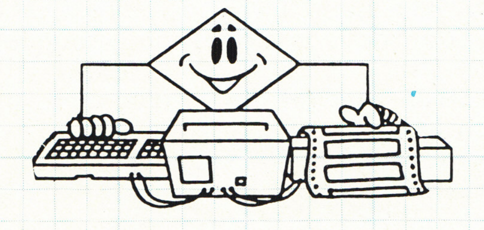


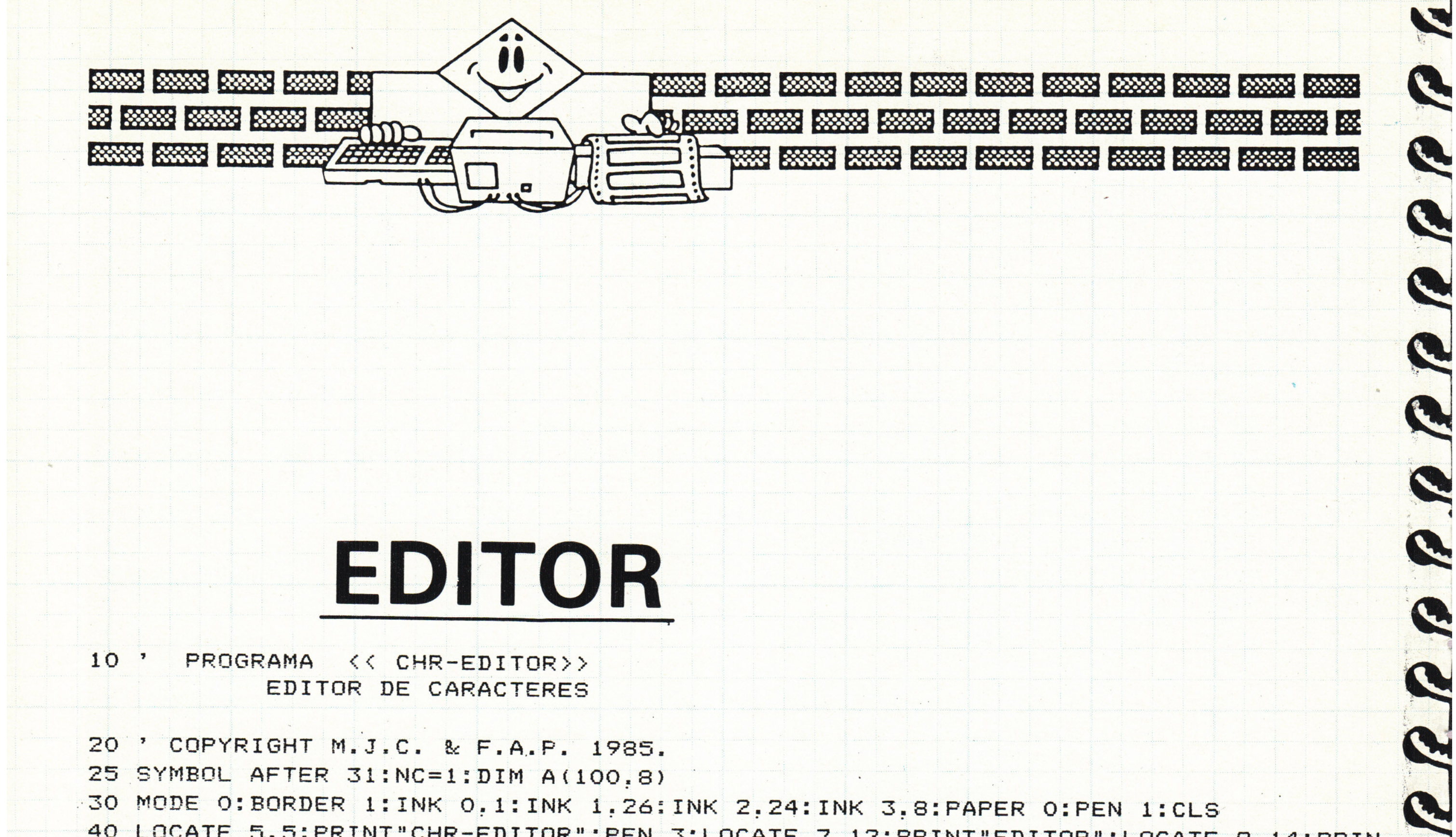


TENIS

```
1 INK 0,1:INK 1,24:PEN 1:PAPER 0:BORDER 1:MODE 1
2 RESTORE 10000:FOR I=1 TO 16:READ X$:LOCATE 1,I:PRINT X$:NEXT I
4 X$=INKEY$:IF X$="" THEN 4 ELSE CLS
10 CLS:INPUT "Nombre del iugador 1 (max. 10 letras)    ";n$:IF LEN(n$)>10 THEN 10
12 CLS:INPUT "Nombre del iugador 2 (max. 10 letras)    ";m$:IF LEN(m$)>10 THEN 12
14 CLS:LOCATE 9,10:PRINT"NIVEL DE JUEGO (1 o 2)"
16 x$=INKEY$:IF x$="1" THEN ni=1 ELSE IF x$="2" THEN ni=2 ELSE 16
20 CLS:pn=0:pm=0:PX=10:PY=10:X1=6:Y1=11:X2=35:Y2=10:GOSUB 2000:GOTO 900
100 IF y<y1-2 OR y>y1+2 THEN RETURN ELSE IF (y=y1-2 AND iy=1) OR (y=y1+2 AND iy=
-1) THEN SOUND 1,100,5,7:ix=-ix:iy=-iy:RETURN
102 SOUND 1,100,5,7:ix=-ix:RETURN
110 IF y<y2-2 OR y>y2+2 THEN RETURN ELSE IF (y=y2-2 AND iy=1) OR (y=y2+2 AND iy=
-1) THEN SOUND 1,100,5,7:ix=-ix:iy=-iy:RETURN
112 SOUND 1,100,5,7:ix=-ix:RETURN
120 IF y<y1-1 OR y>y1+1 THEN RETURN ELSE IF (y=y1-1 AND iy=1) OR (y=y1+1 AND iy=
-1) THEN SOUND 1,100,5,7:ix=-ix:iy=-iy:x=px:y=py:RET
URN
122 SOUND 1,100,5,7:ix=-ix:x=px:y=py:RETURN
130 IF y<y2-1 OR y>y2+1 THEN RETURN ELSE IF (y=y2-1 AND iy=1) OR (y=y2+1 AND iy=
-1) THEN SOUND 1,100,5,7:ix=-ix:iy=-iy:x=px:y=py:RET
URN
132 SOUND 1,100,5,7:ix=-ix:x=px:y=py:RETURN
140 FOR I=-1 TO 1:LOCATE x1,y1+i:PRINT" ":NEXT i:FOR i=-1 TO 1:LOCATE xx,yy+i:PR
INT CHR$(138):NEXT i:x1=xx:y1=yy:RETURN
150 FOR I=-1 TO 1:LOCATE x2,y2+i:PRINT" ":NEXT i:FOR i=-1 TO 1:LOCATE xx,yy+i:PR
INT CHR$(133):NEXT i:x2=xx:y2=yy:RETURN
900 LOCATE PX,PY:PRINT" ":FOR i=6 TO 35:X$=INKEY$:LOCATE i,1:PRINT CHR$(143):LOC
ATE i,20:PRINT CHR$(143):NEXT i:xx=6:yy=11:GOSUB 140
:xx=35:yy=10:GOSUB 150
910 px=21:py=10:IY=1:Z=RND:IF Z<0.5 THEN iX=1 ELSE iX=-1
1000 WHILE (px<35 AND px>6)
1010 x=px+ix:y=py+iy:IF y=2 OR y=19 THEN iy=-iy:SOUND 1,150,5,7
1020 IF (x=x1+1 AND ix=-1) THEN GOSUB 100 ELSE IF (x=x1 AND ix=-1) THEN GOSUB 12
0
1030 IF (x=x2-1 AND ix=1) THEN GOSUB 110 ELSE IF (x=x2 AND ix=1) THEN GOSUB 130
1040 LOCATE px,py:PRINT" ":LOCATE x,y:PRINT CHR$(144):px=x:py=y
1060 x$=INKEY$:IF (x$="q" OR x$="Q") AND y1>3 THEN xx=x1:yy=y1-1:GOSUB 140
1065 IF x$="[" AND y2>3 THEN xx=x2:yy=y2-1:GOSUB 150
1070 IF (x$="a" OR x$="A") AND y1<18 THEN xx=x1:yy=y1+1:GOSUB 140
1075 IF x$="]" AND y2<18 THEN xx=x2:yy=y2+1:GOSUB 150
1077 IF ni=1 THEN GOTO 1200
```

```
1080 IF x$="\" AND x2<34 THEN xx=x2+1:yy=y2:GOSUB 150
1085 IF (x$="x" OR x$="X") AND x1<18 THEN xx=x1+1:yy=y1:GOSUB 140
1090 IF x$="/" AND x2>22 THEN xx=x2-1:yy=y2:GOSUB 150
1095 IF (x$="Z" OR x$="z") AND x1>7 THEN xx=x1-1:yy=y1:GOSUB 140
1200 X$=INKEY$:WEND
1300 IF PX>34 THEN PN=PN+1 ELSE PM=PM+1
1302 GOSUB 2000:GOTO 900
2000 LOCATE 6,22:PRINT n$;":";pn:LOCATE 6,24:PRINT m$;":";pm:LOCATE 9,1:PRINT"1:
PARTIDA      2:ABANDONAR"
2002 X$=INKEY$:IF X$="1" THEN RETURN ELSE IF X$="2" THEN 4000 ELSE 2002
4000 CLS:RUN"
10000 DATA "               TENIS",," Juego de tenis para dos jugadores, con","do
s niveles de juego, en el nivel 1, la","raqueta se m
ueve solo en sentido verti-","cal en el nivel 2, en sentido vertical y","horizon
tal."
10002 DATA" El jugador 1 esta a la izquierda y mue-","ve con Q,A (arriba y abajo
), Z,X (izq.","der.), y el jugador 2 esta a la derec
ha","y mueve con [,] (arriba y abajo), /,\","(izq. der.).",,,,"      PULSA TECLA
PARA CONTINUAR"
```





EDITOR

```
10 '  PROGRAMA  << CHR-EDITOR>>
        EDITOR DE CARACTERES

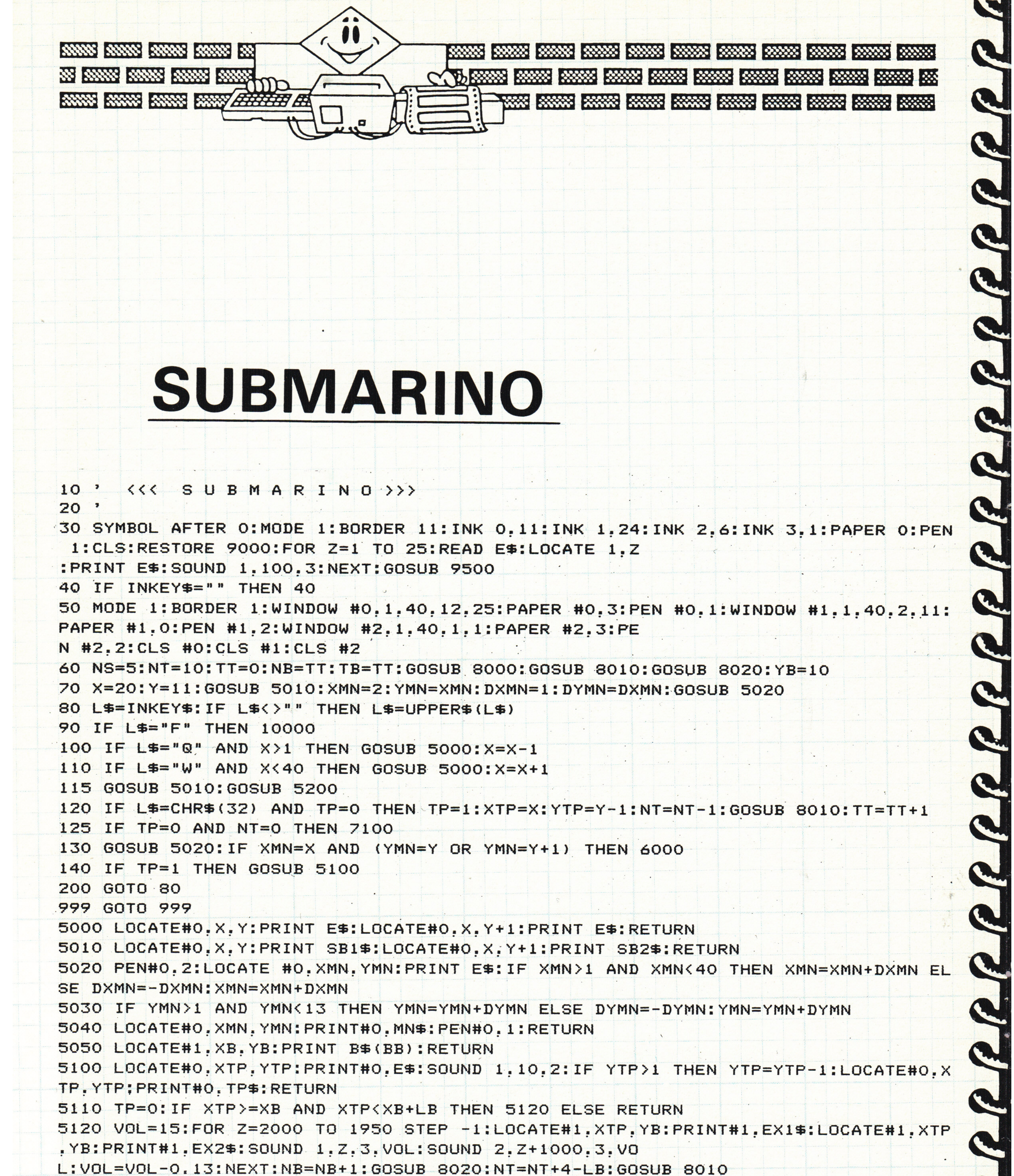
20 ' COPYRIGHT M.J.C. & F.A.P. 1985.
25 SYMBOL AFTER 31:NC=1:DIM A(100,8)
30 MODE 0:BORDER 1:INK 0,1:INK 1,26:INK 2,24:INK 3,8:PAPER 0:PEN 1:CLS
40 LOCATE 5,5:PRINT"CHR-EDITOR":PEN 3:LOCATE 7,12:PRINT"EDITOR":LOCATE 9,14:PRIN
T"DE":LOCATE 5,16:PRINT"CARACTERES"
50 FOR T=1 TO 2000 STEP 5:SOUND 1,T,1:SOUND 2,T+10,1:NEXT
60 MODE 1:INK 3,6:PEN 1:RESTORE 9000:FOR Z=1 TO 22:READ E$:LOCATE 1,Z:PRINT E$:S
OUND 1,200,2:NEXT:GOSUB 9200:GOSUB 8000
80 CLS:LOCATE 2,2:PRINT"DEFINICION DE LAS TECLAS DE MOVIMIENTO":LOCATE 5,10:PRIN
T"PARA SUBIR EL CURSOR?"
90 S$=INKEY$:IF S$="" THEN 90 ELSE LOCATE 1,4:PRINT"SUBIR ";S$
100 LOCATE 5,10:PRINT STRING$(30,32):LOCATE 5,10:PRINT"PARA BAJAR EL CURSOR?"
110 B$=INKEY$:IF B$="" THEN 110 ELSE LOCATE 20,4:PRINT"BAJAR ";B$
120 LOCATE 5,10:PRINT STRING$(30,32):LOCATE 1,10:PRINT"PARA LLEVAR A LA DERECHA
EL CURSOR?"
130 D$=INKEY$:IF D$="" THEN 130 ELSE LOCATE 1,6:PRINT"DERECHA ";D$
140 LOCATE 1,10:PRINT STRING$(39,32):LOCATE 1,10:PRINT"PARA LLEVAR A LA IZQUIERD
A EL CURSOR?"
150 I$=INKEY$:IF I$="" THEN 150 ELSE LOCATE 20,6:PRINT"IZQUIERDA ";I$
154 LOCATE 1,10:PRINT STRING$(39,32):LOCATE 5,10:PRINT"PARA FIJAR EL CURSOR?"
156 F$=INKEY$:IF F$="" THEN 156 ELSE LOCATE 10,8:PRINT"FIJAR CURSOR ";F$
160 LOCATE 1,10:PRINT STRING$(39,32):PRINT"ESTAS CONFORME CON ESTAS TECLAS (S/N)
"

170 L$=INKEY$:IF L$="" THEN 170 ELSE L$=UPPER$(L$):IF L$="N" THEN 80 ELSE IF L$<
>"S" THEN 170
180 PEN 1:CLS:LOCATE 7,1:PRINT"MENU DE OPCIONES:":RESTORE 9100:FOR Z=1 TO 9:READ
 E$:LOCATE 1,Z*2+2:PRINT Z;".- ";E$:NEXT:LOCATE 6,23
:PRINT"PULSA EL NUMERO DE LA OPCION":SOUND 1,100,7
190 L$=INKEY$:IF L$="" THEN 190 ELSE L=VAL(L$):IF L<1 OR L>9 THEN 190
200 CLS:ON L GOTO 300,300,300,300,300,3000,4000,5000,6000
210 GOTO 180
300 LN=1:AL=1:IF L=2 THEN LN=L ELSE IF L=3 THEN LN=L ELSE IF L=4 THEN LN=1:AL=2
ELSE IF L=5 THEN LN=2:AL=LN
305 H(0,0)=1:ERASE H:DIM H(AL*8,LN*8)
310 PEN 2:K=1:FOR Z=1 TO AL*8:LOCATE 1,Z+1
```

```
320 PRINT MID$(STR$(K),2,2):K=K+1:IF K=9 THEN K=1
330 NEXT
340 K=1:FOR Z=1 TO LN*8:LOCATE 1+Z,1
350 PRINT MID$(STR$(K),2,2):K=K+1:IF K=9 THEN K=1
360 NEXT
370 K$=STRING$(LN*8,144):FOR Z=1 TO AL*8:LOCATE 2,Z+1:PRINT K$:NEXT
375 IF S$=CHR$(240) AND B$=CHR$(241) AND D$=CHR$(243) AND I$=CHR$(242) THEN 390
380 LOCATE 33,3:PRINT S$:LOCATE 30,6:PRINT I$:LOCATE 36,6:PRINT D$:LOCATE 33,9:P
RINT B$
390 LOCATE 30,1:PRINT"TECLAS:":LOCATE 33,4:PRINT CHR$(240):LOCATE 31,6:PRINT CHR
$(242);"    ";CHR$(243):LOCATE 33,8:PRINT CHR$(241)
400 LOCATE 31,10:PRINT"FIJAR:":IF F$=CHR$(32) THEN LOCATE 30,11:PRINT "<SPACE>"
ELSE LOCATE 33,11:PRINT F$
405 LOCATE 28,13:PRINT"<ENTER> PARA":LOCATE 30,14:PRINT"TERMINAR"
410 INK 3,6,26:SPEED INK 3,3:H=1:V=1:PEN 3:LOCATE H+1,V+1:PRINT CHR$(143)
420 L$=INKEY$:IF L$=CHR$(13) THEN SOUND 1,100,5:GOTO 1500
430 IF L$=S$ AND V>1 THEN SOUND 1,50,1:GOTO 1000
440 IF L$=B$ AND V<AL*8 THEN SOUND 1,50,1:GOTO 1100
450 IF L$=D$ AND H<LN*8 THEN SOUND 1,50,1:GOTO 1200
460 IF L$=I$ AND H>1 THEN SOUND 1,50,1:GOTO 1300
470 IF L$=F$ THEN SOUND 1,300,3:GOTO 1400
480 GOTO 420
1000 GOSUB 2000:V=V-1:GOSUB 2100:GOTO 420
1100 GOSUB 2000:V=V+1:GOSUB 2100:GOTO 420
1200 GOSUB 2000:H=H+1:GOSUB 2100:GOTO 420
1300 GOSUB 2000:H=H-1:GOSUB 2100:GOTO 420
1400 IF H(V,H)=0 THEN H(V,H)=1 ELSE H(V,H)=0
1410 GOTO 420
1500 GOSUB 2000:XR=16:D(1)=1:ERASE D:DIM D(8)
1505 IF AL=2 THEN XR=18
1510 FOR Z=1 TO LN:FOR X=1 TO AL
1520 CK=3:GOSUB 1800
1530 PEN 2:LOCATE 1,24:PRINT STRING$(40,32):LOCATE 3,24:INPUT"N. DEL CARACTER QU
E TRANSFORMAMOS";T
1540 LOCATE 1,24:PRINT STRING$(40,32)
1550 IF T<33 THEN LOCATE 1,24:PRINT"CARACTER PROHIBIDO, ESTA RESERVADO":GOTO 157
0 ELSE IF T<>143 AND T<>144 THEN 1580
1560 IF T=143 OR T=144 THEN LOCATE 1,24:PRINT"CARACTER PROHIBIDO, ES ";CHR$(T) E
LSE 1580
1570 SOUND 1,1000,30:FOR T=1 TO 2000:NEXT:LOCATE 1,24:PRINT STRING$(40,32):GOTO
1530
1580 LOCATE 1,24:PRINT"ANTIGUO CARACTER: ";CHR$(T):LOCATE 9,25:PRINT"LO TRANSFOR
MAMOS (S/N)"
1590 L$=INKEY$:IF L$="" THEN 1590 ELSE L$=UPPER$(L$):IF L$="N" THEN LOCATE 1,24:
PRINT STRING$(40,32):LOCATE 1,25:PRINT STRING$(39,32
):GOTO 1530 ELSE IF L$<>"S" THEN 1590
1595 LOCATE 1,24:PRINT STRING$(40,32):LOCATE 1,25:PRINT STRING$(39,32)
1600 CC=0:FOR Y=X*8-7 TO X*8:SOUND 1,200,5:G$="":CC=CC+1:FOR I=Z*8-7 TO Z*8:SOUN
D 1,100,2:G$=G$+RIGHT$(STR$(H(Y,I)),1):NEXT:A(NC,CC)
=VAL("&X"+G$):D(CC)=A(NC,CC):NEXT
1610 A(NC,0)=T:NC=NC+1
1620 LOCATE 1,XR:PRINT T;":";:FOR I=2 TO 9:LOCATE I*4,XR:PRINT USING"###";A(NC-1
,I-1):NEXT
1625 CK=2:GOSUB 1800
1630 SYMBOL T,D(1),D(2),D(3),D(4),D(5),D(6),D(7),D(8):XR=XR+2:NEXT
1640 NEXT
1650 GOSUB 8000:GOTO 180
```

```
1800 PEN CK:K=1:FOR y=x*8-8 TO x*8:LOCATE 1,y+1:PRINT MID$(STR$(K),2,2):K=K+1:NE
XT
1810 K=1:FOR I=Z*8-8 TO Z*8:LOCATE 1+I,1:PRINT MID$(STR$(K),2,2):K=K+1:NEXT:RETU
RN
2000 LOCATE H+1,V+1:IF H(V,H)=0 THEN PEN 2:PRINT CHR$(144) ELSE PEN 1:PRINT CHR$
(143)
2010 RETURN
2100 PEN 3:LOCATE H+1,V+1:PRINT CHR$(143):PEN 2:RETURN
3000 PEN 1:LOCATE 5,1:PRINT"VER LOS CARACTERES":CC=24:CF=1
3010 LOCATE 1,22:PRINT"PARA VOLVER AL MENU PULSA M":LOCATE 1,23:PRINT"PARA VER O
TRO CARACTER PULSA O":LOCATE 1,24:PRINT"PARA CAMBIAR
 COLOR DEL CARACTER PULSA C":LOCATE 1,25:PRINT"PARA CAMBIAR COLOR DEL FONDO PULS
A F"
3020 LOCATE 3,20:INPUT"QUE CARACTER QUIERES VER";T
3030 LOCATE 3,20:PRINT STRING$(37,32):IF T<33 OR T>255 OR T<>INT(T) THEN 3020
3040 PEN 2:LOCATE 20,12:PRINT CHR$(T)
3050 L$=INKEY$:IF L$="" THEN 3050 ELSE L$=UPPER$(L$):IF L$="M" THEN GOSUB 3600:G
OTO 180 ELSE IF L$="O" THEN GOSUB 3600:CLS:GOTO 3000
 ELSE IF L$="C" THEN 3300 ELSE IF L$="F" THEN 3500 ELSE 3050
3300 CC=CC+1:IF CC>26 THEN CC=0 ELSE IF CC=CF THEN CC=CC+1:IF CC>26 THEN CC=0
3310 INK 2,CC:GOTO 3050
3500 CF=CF+1:IF CF>26 THEN CF=0 ELSE IF CC=CF THEN CF=CF+1:IF CF>26 THEN CF=0
3510 INK 0,CF:GOTO 3050
3600 INK 0,1:INK 2,24:RETURN
4000 IF NC>0 THEN PRINT"PREPARA EL CASSETTE PARA ALMACENAR TODOSLOS CARACTERES Q
UE HAS DEFINIDO" ELSE GOTO 180
4010 PRINT:PRINT:SPEED WRITE 1:PRINT"NOMBRE DEL ARCHIVO":PRINT"(maximo 10 caract
eres)":PRINT:PRINT:INPUT N$:IF LEN(N$)>10 THEN CLS:G
OTO 4010
4015 CLS:LOCATE 2,12:PRINT"ALMACENANDO";NC-1;"CARACTERES DEFINIDOS"
4020 OPENOUT N$
4030 PRINT#9,NC
4040 FOR Z=1 TO NC-1:FOR X=0 TO 8
4050 PRINT#9,A(Z,X)
4060 NEXT:NEXT
4070 CLOSEOUT
4080 CLS:LOCATE 9,12:PRINT"CARACTERES ALMACENADOS":GOSUB 8000:GOTO 180
5000 PRINT"CARGA DESDE EL CASSETTE DE CARACTERES   DEFINIDOS":PRINT:PRINT
5010 OPENIN ""
5020 INPUT#9,NC
5030 A(1,1)=1:D(1)=1:ERASE A,D:DIM A(100,8),D(8)
5040 FOR Z=1 TO NC-1:FOR X=0 TO 8
5050 INPUT#9,A(Z,X):D(X)=A(Z,X)
5060 NEXT:SYMBOL D(0),D(1),D(2),D(3),D(4),D(5),D(6),D(7),D(8):NEXT
5070 CLOSEIN
5080 CLS:LOCATE 1,12:PRINT NC-1;"CARACTERES CARGADOS DESDE CASSETTE":GOSUB 8000:
GOTO 180
6000 SYMBOL AFTER 31:MODE 1:INK 0,1:INK 1,24:PAPER 0:PEN 1:CLS:PRINT"PREPARADO P
ARA EL SIGUIENTE PROGRAMA":RUN""
8000 LOCATE 2,25:PRINT"PULSA CUALQUIER TECLA PARA CONTINUAR"
8010 IF INKEY$="" THEN 8010
8020 RETURN
9000 DATA "E D I T O R   D E   C A R A C T E R E S","==========================
===========",,"  Este programa permite la definicio
n de",nuevos caracteres no existentes en la,serie de caracteres graficos que inc
or-,pora el AMSTRAD.,
```

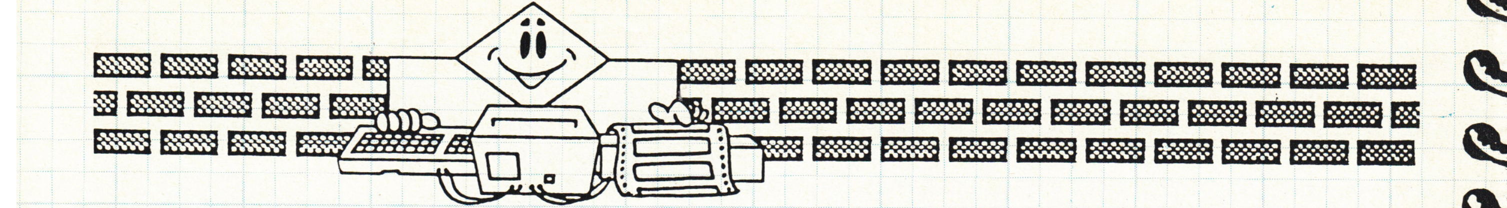
```
9010 DATA "  Podras, de esta forma, definir figuras","ineditas para tus dibujos,
 graficas y",juegos..."  El caracter recien definido
 podras",asignarlo a cualquiera de los existentes,"(desde el 33 al 255), de form
a que"
9020 DATA debes tener cuidado con ciertos numeros,(ver manual AMSTRAD Apendice I
II p 2-13).."  Los caracteres que puedes crear seran
",todos de 8 x 8 puntos pero con el pro-,grama puedes definir figuras formadas,p
or mas de un caracter.
9100 DATA DEFINIR CARACTER 1 x 1,DEFINIR CARACTERES 2 x 1,DEFINIR CARACTERES 3 x
 1,DEFINIR CARACTERES 1 x 2,DEFINIR CARACTERES 2 x 2
,VER CARACTERES,ALMACENAR CARACTERES EN CASSETTE,CARGAR CARACTERES DESDE CASSETT
E,FIN DEL PROGRAMA
9200 SYMBOL 144,255,129,129,129,129,129,129,255:RETURN
```



SUBMARINO

```
10 '  <<<  S U B M A R I N O >>>
20 '
30 SYMBOL AFTER 0:MODE 1:BORDER 11:INK 0,11:INK 1,24:INK 2,6:INK 3,1:PAPER 0:PEN
 1:CLS:RESTORE 9000:FOR Z=1 TO 25:READ E$:LOCATE 1,Z
:PRINT E$:SOUND 1,100,3:NEXT:GOSUB 9500
40 IF INKEY$="" THEN 40
50 MODE 1:BORDER 1:WINDOW #0,1,40,12,25:PAPER #0,3:PEN #0,1:WINDOW #1,1,40,2,11:
PAPER #1,0:PEN #1,2:WINDOW #2,1,40,1,1:PAPER #2,3:PE
N #2,2:CLS #0:CLS #1:CLS #2
60 NS=5:NT=10:TT=0:NB=TT:TB=TT:GOSUB 8000:GOSUB 8010:GOSUB 8020:YB=10
70 X=20:Y=11:GOSUB 5010:XMN=2:YMN=XMN:DXMN=1:DYMN=DXMN:GOSUB 5020
80 L$=INKEY$:IF L$<>"" THEN L$=UPPER$(L$)
90 IF L$="F" THEN 10000
100 IF L$="Q" AND X>1 THEN GOSUB 5000:X=X-1
110 IF L$="W" AND X<40 THEN GOSUB 5000:X=X+1
115 GOSUB 5010:GOSUB 5200
120 IF L$=CHR$(32) AND TP=0 THEN TP=1:XTP=X:YTP=Y-1:NT=NT-1:GOSUB 8010:TT=TT+1
125 IF TP=0 AND NT=0 THEN 7100
130 GOSUB 5020:IF XMN=X AND (YMN=Y OR YMN=Y+1) THEN 6000
140 IF TP=1 THEN GOSUB 5100
200 GOTO 80
999 GOTO 999
5000 LOCATE#0,X,Y:PRINT E$:LOCATE#0,X,Y+1:PRINT E$:RETURN
5010 LOCATE#0,X,Y:PRINT SB1$:LOCATE#0,X,Y+1:PRINT SB2$:RETURN
5020 PEN#0,2:LOCATE #0,XMN,YMN:PRINT E$:IF XMN>1 AND XMN<40 THEN XMN=XMN+DXMN EL
SE DXMN=-DXMN:XMN=XMN+DXMN
5030 IF YMN>1 AND YMN<13 THEN YMN=YMN+DYMN ELSE DYMN=-DYMN:YMN=YMN+DYMN
5040 LOCATE#0,XMN,YMN:PRINT#0,MN$:PEN#0,1:RETURN
5050 LOCATE#1,XB,YB:PRINT B$(BB):RETURN
5100 LOCATE#0,XTP,YTP:PRINT#0,E$:SOUND 1,10,2:IF YTP>1 THEN YTP=YTP-1:LOCATE#0,X
TP,YTP:PRINT#0,TP$:RETURN
5110 TP=0:IF XTP>=XB AND XTP<XB+LB THEN 5120 ELSE RETURN
5120 VOL=15:FOR Z=2000 TO 1950 STEP -1:LOCATE#1,XTP,YB:PRINT#1,EX1$:LOCATE#1,XTP
,YB:PRINT#1,EX2$:SOUND 1,Z,3,VOL:SOUND 2,Z+1000,3,VO
L:VOL=VOL-0.13:NEXT:NB=NB+1:GOSUB 8020:NT=NT+4-LB:GOSUB 8010
5130 LOCATE#1,XB,YB:PRINT#1,STRING$(3,32):XB=0:RETURN
```

```
5200 IF XB<2 THEN LOCATE#1,1,YB:PRINT#1,STRING$(3,32):BB=INT(RND*6+1):LB=LEN(B$(
BB))-1:XB=40-LB:TB=TB+1
5210 XB=XB-1:LOCATE#1,XB,YB:PRINT#1,B$(BB):RETURN
6000 PEN#0,2:VOL=15:FOR Z=3000 TO 2950 STEP -1:LOCATE#0,XMN,YMN:PRINT#0,EX1$:LOC
ATE#0,XMN,YMN:PRINT#0,EX2$:SOUND 1,Z,3,VOL:SOUND 2,Z
+1000,3,VOL:VOL=VOL-0.13:NEXT:PEN#0,1:NS=NS-1:GOSUB 8000:IF NS=0 THEN 7000 ELSE
80
7000 LOCATE#0,1,1:PRINT#0,"TU FLOTA DE SUBMARINOS HA SIDO DESTRUIDA":GOTO 7500
7100 LOCATE#0,1,1:PRINT#0,"TE QUEDASTE SIN TORPEDOS, HAS PERDIDO!!!":GOTO 7500
7500 FOR T=1 TO 3000:NEXT:MODE 1:CLS:LOCATE 5,6:PRINT"PUNTUACION:":LOCATE 2,8:PR
INT"N. TOTAL DE TORPEDOS DISPARADOS:";TT:LOCATE 2,10
:PRINT"N. TOTAL DE BARCOS ENEMIGOS:";TB:LOCATE 2,12:PRINT"N. BARCOS ENEMIGOS HUN
DIDOS:";NB
7510 LOCATE 1,14:PRINT"HAS HUNDIDO EL";INT(NB*100/TB);"% DE LA FLOTA ENEMIGA":LO
CATE 7,22:PRINT"PARA OTRA PARTIDA PULSA P":LOCATE 7,
24:PRINT"PARA OTRO PROGRAMA PULSA O"
7520 L$=INKEY$:IF L$="" THEN 7520 ELSE L$=UPPER$(L$)
7530 IF L$="P" THEN RUN ELSE IF L$="O" THEN 10000 ELSE 7520
8000 LOCATE #2,2,1:PRINT#2,"N. ";NS$;":":LOCATE #2,8,1:PRINT#2,USING"##";NS:RETU
RN
8010 LOCATE #2,13,1:PRINT#2,"N. ";TP$;":":LOCATE #2,18,1:PRINT#2,USING"###";NT:R
ETURN
8020 LOCATE #2,25,1:PRINT#2,B$(4);"HUNDIDOS:":LOCATE #2,36,1:PRINT#2,USING"###";
NB:RETURN
9000 DATA "     <<<  S U B M A R I N O  >>>",," Eres el Capitan de un submarino
 en","guerra, y por lo tanto tu mision es",hundir el
 maximo numero posible de,barcos enemigos..," Te bastara un solo torpedo para h
undir"
9010 DATA a cualquiera de tus enemigos y por cada,uno que hundas recibiras mas t
orpedos..." El enemigo estara defendido por medio",
de una terrible mina submarina..." El movimiento del submarino se realiza"
9020 DATA con las teclas Q (a la izquierda) y,"W a la derecha), el torpedo se di
spara",pulsando la barra espaciadora..." El iuego t
ermina al ser hundido cinco","veces, al acabarse los torpedos o al",pulsar la te
cla F.
9030 DATA ,," PULSA UNA TECLA PARA COMENZAR EL JUEGO"
9500 SYMBOL 170,16,56,124,124,254,254,238,198:SYMBOL 171,198,198,238,254,124,124
,56,40:SYMBOL 172,0,0,2,78,83,255,127,62:SYMBOL 173,
0,0,0,0,8,28,254,127:SYMBOL 174,0,7,116,55,255,127,63,31:SYMBOL 175,64,192,39,24
6,255,255,254,252
9510 SYMBOL 176,0,0,73,73,255,127,63,31:SYMBOL 177,32,60,34,62,255,255,254,252:S
YMBOL 178,0,0,238,102,255,127,63,31:SYMBOL 179,0,127
,170,213,255,255,255,255:SYMBOL 180,48,248,172,84,255,255,254,252
9520 SYMBOL 181,4,60,20,255,63,31,15,7:SYMBOL 182,16,241,83,255,255,255,255,255:
SYMBOL 183,240,168,84,255,252,252,248,240
9530 SYMBOL 186,16,56,56,56,56,16,56,40:SYMBOL 187,36,60,235,86,106,215,60,36:SY
MBOL 188,133,80,132,41,134,53,74,149:SYMBOL 189,34,2
0,165,66,165,153,74,36:E$=CHR$(32):SB1$=CHR$(170):SB2$=CHR$(171):TP$=CHR$(186):M
N$=CHR$(187)
9540 EX1$=CHR$(188):EX2$=CHR$(189):B$(1)=CHR$(172)+E$:B$(2)=CHR$(173)+E$:B$(3)=C
HR$(174)+CHR$(175)+E$:B$(4)=CHR$(176)+CHR$(177)+E$:S
YMBOL 190,1,0,3,63,127,255,127,63:SYMBOL 191,192,192,224,248,253,254,254,253
9550 B$(5)=CHR$(178)+CHR$(179)+CHR$(180)+E$:B$(6)=CHR$(181)+CHR$(182)+CHR$(183)+
E$:NS$=CHR$(190)+CHR$(191):RETURN
10000 MODE 1:CLS:PRINT"PREPARADO PARA EL SIGUIENTE PROGRAMA:":RUN""
```



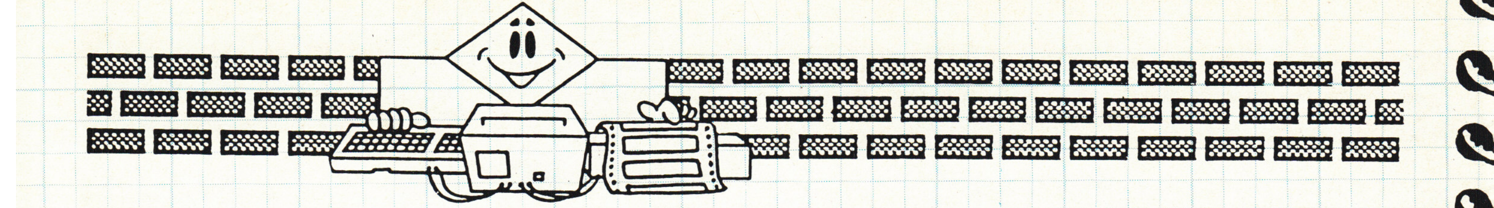
ABECEDARIO

```
10 '        A B E C E D A R I O
20 '
30 MODE 0:BORDER 8:INK 0,8:INK 1,26,13:PAPER 0:PEN 1:SPEED INK 5,5:CLS:LOCATE 1,
12:PRINT"A B E C E D A R I O":LN=4:GOSUB 10000:SPEED
 INK 2,2:LN=2:GOSUB 10000
40 MODE 1:BORDER 11:INK 0,11:INK 1,26:INK 2,8,6:INK 3,24:SPEED INK 5,5:PAPER 0:P
EN 3:CLS
50 RESTORE 9000:FOR Z=1 TO 25:READ E$:FOR X=1 TO LEN(E$):EE$=MID$(E$,X,1):E=ASC(
EE$):SOUND 1,E,2:LOCATE X,Z:PRINT EE$
60 FOR T=1 TO 30:NEXT
70 NEXT X,Z:GOSUB 9100
80 IF INKEY$="" THEN 80
90 H$="ABC"+CHR$(248)+"DEFGHIJKL"+CHR$(249)+"MN"+CHR$(250)+"OPQRSTUVXYZ":K$=H$:L
H=LEN(H$):DIM H$(LH),I$(LH),XI(LH),YI(LH):S$="N"
100 CLS:PEN 0:PAPER 3:LOCATE 2,1:PRINT STRING$(38,32):LOCATE 2,1:PRINT"DEBEN QUE
DAR COLOCADAS DE ESTA FORMA":LOCATE 6,25:PRINT"PULSA
 UNA TECLA PARA COMENZAR":PAPER 0
110 PEN 2:FOR Y=4 TO 22:LOCATE 2,Y:PRINT AB$:LOCATE 39,Y:PRINT AS$:NEXT
120 PEN 3:FOR Y=4 TO 22 STEP 3:LOCATE 1,Y:PRINT CHR$(241):LOCATE 40,Y:PRINT CHR$
(240):NEXT
130 FOR Y=5 TO 23 STEP 3:LOCATE 3,Y:PRINT STRING$(36,154):NEXT
135 FOR Y=5 TO 23 STEP 3:FOR X=5 TO 35 STEP 10:LOCATE X,Y:PRINT CHR$(158):NEXT:N
EXT
140 PEN 2:H=5:V=3:FOR Z=1 TO LH:LOCATE H,V:PRINT MID$(H$,Z,1):H=H+10
150 IF H=45 THEN H=5:V=V+3
160 NEXT
170 IF INKEY$="" THEN 170
180 PEN 1:FOR Y=3 TO 21 STEP 3:FOR X=5 TO 35 STEP 10:LOCATE X,Y:PRINT CHR$(32):N
EXT:NEXT:SOUND 1,100,10
190 PAPER 3:PEN 0:LOCATE 2,1:PRINT STRING$(38,32):LOCATE 2,1:PRINT"ABECEDARIO":L
OCATE 4,25:PRINT"PARA TERMINAR O ABANDONAR PULSA Z":
GOSUB 8000:GOSUB 8100
200 N=RND(TIME):FOR Z=1 TO LH
210 K=INT(RND*LH+1):IF H$(K)="" THEN H$(K)=LEFT$(K$,1):K$=MID$(K$,2,LH) ELSE 210
```

```
220 NEXT
230 PEN 1:H=5:V=3:FOR Z=1 TO LH:LOCATE H,V:PRINT H$(Z):XI(Z)=H:YI(Z)=V:H=H+10
240 IF H=45 THEN H=5:V=V+3
250 NEXT
260 PEN 3:XC=4:YC=22:C$="D":LOCATE XC,YC:PRINT CD$
265 EVERY 50,0 GOSUB 8600
270 L$=INKEY$:IF L$="Z" OR L$="z" THEN 500
280 IF L$=CHR$(32) THEN 1000
290 IF L$=CHR$(240) THEN 2000
300 IF L$=CHR$(241) THEN 3000
310 IF L$=CHR$(242) THEN 4000
320 IF L$=CHR$(243) THEN 5000
330 GOTO 270
500 PAPER 3:PEN 0:LOCATE 2,25:PRINT"ABANDONAS (A) O EVALUO LA JUGADA (E)"
510 L$=INKEY$:IF L$="" THEN 510 ELSE L$=UPPER$(L$):IF L$="A" THEN 700 ELSE IF L$
<>"E" THEN 510
520 PAPER 3:PEN 0:LOCATE 1,25:PRINT STRING$(39,32):PEN 2:LOCATE 9,25:PRINT"EVALU
ANDO LA JUGADA..."
530 I$="":FOR Z=1 TO LH:PS=(YI(Z)/3*4-4)+(XI(Z)+5)/10:I$(PS)=H$(Z):NEXT:FOR Z=1
TO LH:I$=I$+I$(Z):NEXT
540 IF I$<>H$ THEN 600 ELSE PEN 3:LOCATE 1,25:PRINT STRING$(39,143):PEN 0:LOCATE
 5,25:PRINT"POR LAS LETRAS BIEN COLOCADAS":FOR Z=1 T
O LH:PT=PT+10:SOUND 1,ABS(PT),3:GOSUB 8100:NEXT
550 PAPER 3:PEN 0:LOCATE 1,25:PRINT STRING$(39,32):PEN 2:LOCATE 5,25:PRINT"POR E
L POCO TIEMPO UTILIZADO:";TM
560 FOR T=TM TO 2000 STEP 10:SOUND 1,1500-TM,3:PT=PT+10:GOSUB 8100:NEXT
570 IF SQ(1)<>4 THEN 570
580 FOR T=1 TO 2000:NEXT:GOTO 700
600 PAPER 3:PEN 0:LOCATE 1,25:PRINT STRING$(39,32):PEN 2:LOCATE 3,25:PRINT"LAS L
ETRAS NO ESTAN BIEN COLOCADAS":SOUND 1,500,50:FOR T=
1 TO 2000:NEXT
610 PAPER 3:PEN 0:LOCATE 1,25:PRINT STRING$(39,32):PEN 2:LOCATE 2,25:PRINT"ABAND
ONAS (A) O CONTINUAS EL JUEGO (C)"
620 L$=INKEY$:IF L$="" THEN 620 ELSE L$=UPPER$(L$):IF L$="A" THEN 700 ELSE IF L$
="C" THEN PEN 0:LOCATE 1,25:PRINT STRING$(39,143):PE
N 0:LOCATE 4,25:PRINT"PARA TERMINAR O BANDONAR PULSA Z":PAPER 0:PEN 3:GOTO 270 E
LSE 620
700 PAPER 0:PEN 1:CLS
710 LOCATE 1,5:PRINT"PUNTOS:";PT:LOCATE 1,7:PRINT"TIEMPO:";TM:LOCATE 4,10:PRINT"
PULSA LA OPCION QUE PREFIERAS:":LOCATE 5,12:PRINT"P
PARA OTRA PARTIDA":LOCATE 5,14:PRINT"T PARA OTRO PROGRAMA"
720 L$=INKEY$:IF L$="" THEN 720 ELSE L$=UPPER$(L$):IF L$="P" THEN RUN ELSE 900
900 BORDER 1:INK 0,1:INK 1,24:PAPER 0:PEN 1:CLS:PRINT"PREPARADO PARA EL SIGUIENT
E PROGRAMA":RUN""
1000 IF S$="S" THEN 1490
1005 IF C$="D" THEN CX=XC+1 ELSE CX=XC
1010 FOR Z=1 TO LH:IF CX=XI(Z) AND YC-1=YI(Z) THEN LT=Z:Z=LH*2-1
1020 NEXT:IF Z<LH*2 THEN GOSUB 8500:GOTO 270
1030 LT$=H$(LT):IF LT$=CH$ THEN GOSUB 8500:GOTO 270 ELSE CH$=LT$
1040 LOCATE XI(LT),YI(LT):PRINT " ":PEN 1:YI(LT)=YI(LT)+1:LOCATE XI(LT),YI(LT):P
RINT LT$:PEN 3:S$="S":GOTO 270
1490 IF XI(LT)=2 THEN 1600 ELSE IF XI(LT)=39 THEN 1700
1500 FOR Z=1 TO LH
1510 IF Z=LT THEN 1530
1520 IF XI(Z)=XI(LT) AND YI(Z)=YI(LT)-1 THEN Z=LT*2-1
1530 NEXT:IF Z=LT*2 THEN GOSUB 8500:GOTO 270
1540 LOCATE XI(LT),YI(LT):PRINT CHR$(95):SOUND 1,100,5:PEN 1:YI(LT)=YI(LT)-1:LOC
ATE XI(LT),YI(LT):PRINT LT$:PEN 3
1550 LT$="":LT=0:S$="N":PS=0:GOSUB 8000:GOTO 270
```

```
1600 PS=PS+1:GOSUB 8000:IF YC=22 THEN GOSUB 8500:GOTO 270
1610 PEN 2:LOCATE 2,YC:PRINT AB$;E$:YI(LT)=YI(LT)+3:YC=YI(LT):PEN 3:LOCATE XC,YC
:PRINT CI$:PEN 1:LOCATE XI(LT),YI(LT):PRINT H$(LT):P
EN 3:GOTO 270
1700 PS=PS+1:GOSUB 8000:IF YC=4 THEN GOSUB 8500:GOTO 270
1710 PEN 2:LOCATE 37,YC:PRINT E$;AB$:YI(LT)=YI(LT)-3:YC=YI(LT):PEN 3:LOCATE XC,Y
C:PRINT CD$:PEN 1:LOCATE XI(LT),YI(LT):PRINT H$(LT):
PEN 3:GOTO 270
2000 IF S$="S" THEN GOSUB 8500:GOTO 270
2010 IF YC>4 THEN LOCATE XC,YC:PRINT E$ ELSE 270
2015 IF XC=2 OR XC=3 THEN PEN 2:LOCATE 2,YC:PRINT AB$ ELSE IF XC=37 OR XC=38 THE
N PEN 2:LOCATE 39,YC:PRINT AS$
2020 YC=YC-3:PEN 3:LOCATE XC,YC:IF C$="D" THEN PRINT CD$ ELSE PRINT CI$
2030 GOTO 270
3000 IF S$="S" THEN GOSUB 8500:GOTO 270
3010 IF YC<22 THEN LOCATE XC,YC:PRINT E$ ELSE 270
3015 IF XC=2 OR XC=3 THEN PEN 2:LOCATE 2,YC:PRINT AB$ ELSE IF XC=37 OR XC=38 THE
N PEN 2:LOCATE 39,YC:PRINT AS$
3020 YC=YC+3:PEN 3:LOCATE XC,YC:IF C$="D" THEN PRINT CD$ ELSE PRINT CI$
3030 GOTO 270
4000 IF XC<3 THEN 270
4005 IF S$="S" AND C$="D" THEN XI(LT)=XI(LT)-1
4010 LOCATE XC,YC:PRINT E$:XC=XC-1:LOCATE XC,YC:PRINT CI$:C$="I":IF S$="S" THEN
PS=PS+1:GOSUB 8000:PEN 1:LOCATE XC,YC:PRINT LT$:xi(l
t)=xi(lt)-1:PEN 3
4020 IF XC=37 THEN PEN 2:LOCATE 39,YC:PRINT AS$:PEN 3
4030 GOTO 270
5000 IF XC>37 THEN 270
5005 IF S$="S" AND C$="I" THEN XI(LT)=XI(LT)+1
5010 LOCATE XC,YC:PRINT E$:XC=XC+1:PEN 3:LOCATE XC,YC:PRINT CD$:C$="D":IF S$="S"
 THEN PS=PS+1:GOSUB 8000:PEN 1:XI(LT)=XI(LT)+1:LOCAT
E XI(LT),YI(LT):PRINT LT$:PEN 3
5020 IF XC=3 THEN PEN 2:LOCATE 2,YC:PRINT AB$:PEN 3
5030 GOTO 270
8000 PAPER 3:PEN 0:LOCATE 15,1:PRINT USING"PASOS:##";PS:PAPER 0:PEN 3
8010 IF PS>10 THEN GOSUB 8500
8020 RETURN
8100 PAPER 3:PEN 0:LOCATE 27,1:PRINT USING"PUNTOS:####";PT:PAPER 0:PEN 3:RETURN
8500 SOUND 1,1000,10:PT=PT-1:GOSUB 8100:RETURN
8600 TM=TM+1:RETURN
9000 DATA "           A B E C E D A R I O"," ","  Es un juego de ingenio y habili
dad, en",el que hay que colocar las letras por,orden
 alfabetico.," ","  Para hacerlo tienes que ayudarte con",una carretilla elevado
ra que te trans-
9010 DATA portara las letras hacia derecha e,"izquierda, no mas de 10 pasos segu
idos;","y de dos ascensores, uno de bajada a la","iz
quierda y otro de subida a la derecha,",por donde descenderan o ascenderan de,ni
vel las letras y la carretilla.
9020 DATA " ","  La carretilla se mueve con las teclas",del cursor y las letras
se recogen o,sueltan de la carretilla pulsando la,ba
rra espaciadora.," ","  El programa dispone de un cronometro"
9030 DATA que medira el tiempo transcurrido.," "," "," PULSA UNA TECLA PARA COME
NZAR EL JUEGO"
9100 SYMBOL AFTER 243:SYMBOL 244,195,36,24,0,195,36,24,0:SYMBOL 245,24,36,195,0,
24,36,195,0:SYMBOL 246,97,81,117,37,125,253,255,69:S
YMBOL 247,134,138,174,164,190,191,255,146:SYMBOL 248,104,136,136,142,138,138,106
,0:SYMBOL 249,238,68,68,68,68,85,255,0
```

```
9110 SYMBOL 250,240,30,0,230,246,222,206,0:CD$=CHR$(246)+CHR$(95):CI$=CHR$(95)+C
HR$(247):AB$=CHR$(244):AS$=CHR$(245):E$="   ":RETURN
10000 FOR T=100 TO 900 STEP 10
10010 SOUND 1,T,LN
10020 IF SQ(1)<>4 THEN 10020
10030 NEXT:RETURN
11000 FOR Y=3 TO 21 STEP 3:FOR X=5 TO 35 STEP 10:PRINT(Y/3*4-4)+(X+5)/10;:NEXT:N
EXT
```

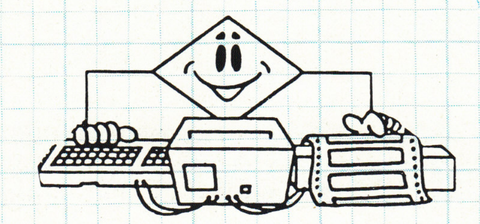


GRAFICAS LINEALES

```
10 '  GRAFICAS LINEALES
20 ' COPYRIGHT M.J.C. & F.A.P.
30 MODE 1:BORDER 1:INK 0,1:INK 1,26:INK 2,24:INK 3,6:PAPER 0:PEN 1:CLS
40 RESTORE 9000:FOR Z=1 TO 22:READ E$:LOCATE 1,Z:PRINT E$:NEXT:SOUND 1,100,10
50 IF INKEY$="" THEN 50
55 CLS:INPUT"SI VAS A INTRODUCIR LOS DATOS POR MEDIO DEL TECLADO INTRODUCE T, SI
 LOS TIENES  ALMACENADOS EN CASSETTE INTRODUCE C";M$
57 M$=UPPER$(M$):IF M$="C" THEN GOSUB 1000:CLS:GOTO 460 ELSE IF M$<>"T" THEN CLS
:GOTO 55
60 CLS:LOCATE 2,10:LINE INPUT "NOMBRE DE LA VARIABLE A REPRESENTAR EN EL EJE X "
;V1$:CLS:LOCATE 2,10:LINE INPUT "NOMBRE DE LA VARIAB
LE A REPRESENTAR EN EL EJE Y ";V2$
70 IF LEN(V1$)=0 OR LEN(V2$)=0 THEN SOUND 1,500,10:GOTO 60
80 LOCATE 1,12:PRINT"LA INTRODUCCION DE LOS DATOS NO TIENE   QUE ESTAR ORDENADA
PARA NINGUNA DE LAS  VARIABLES":LOCATE 1,15:PRINT"QU
IERES QUE LOS ORDENE YO DE MENOR A    MAYOR PARA LA VARIABLE ";V1$:PRINT" (S/N)"
:INPUT R$
90 CLS:R$=UPPER$(R$):IF R$<>"S" AND R$<>"N" THEN SOUND 1,500,10:GOTO 80
100 LOCATE 1,5:INPUT"CUAL ES EL NUMERO TOTAL DE DATOS";N:IF N<1 OR N<>INT(N) THE
N SOUND 1,500,10:CLS:GOTO 100 ELSE IF N>4000 THEN LO
CATE 1,20:PRINT"SON DEMASIADOS DATOS, NO PUEDO UTILIZAR TANTOS":FOR T=1 TO 2000:
NEXT:CLS:GOTO 100
110 CLS:DIM A(N-1,1)
120 LOCATE 1,2:PRINT"INTRODUCCION DE DATOS PARA LA VARIABLE  ";V1$
130 FOR Z=0 TO N-1:LOCATE 5,12:PRINT STRING$(36,32):LOCATE 5,12:PRINT"VALOR N.";
Z+1;": ";:INPUT A(Z,0):NEXT
140 LOCATE 3,20:PRINT"FIN DE LA INTRODUCCION DE LOS DATOS DE  LA VARIABLE ";V1$:
FOR T=1 TO 2000:NEXT:CLS
150 LOCATE 1,2:PRINT"INTRODUCCION DE DATOS PARA LA VARIABLE  ";V2$
160 FOR Z=0 TO N-1:LOCATE 5,12:PRINT STRING$(36,32):LOCATE 5,12:PRINT"VALOR N.";
Z+1;": ";:INPUT A(Z,1):NEXT
170 LOCATE 3,20:PRINT"FIN DE LA INTRODUCCION DE LOS DATOS DE  LA VARIABLE ";V2$:
FOR T=1 TO 2000:NEXT:CLS
180 IF R$="N" THEN 330
190 LOCATE 2,12:PRINT"UN MOMENTO, ESTOY ORDENANDO LOS DATOS"
200 FOR Z=0 TO N-2
210 P=0
```

```
220 FOR X=0 TO N-2
230 IF A(X,0)<=A(X+1,0) THEN 280
240 H=A(X,0):A(X,0)=A(X+1,0):A(X+1,0)=H
250 H=A(X,1):A(X,1)=A(X+1,1):A(X+1,1)=H
270 P=1
280 NEXT
290 IF P=0 THEN Z=N
300 NEXT
310 CLS:PEN 2:LOCATE 2,12:PRINT"LISTA DE DATOS ORDENADA RESPECTO A LA   VARIABLE
 ";V1$
320 FOR T=1 TO 2000:NEXT:CLS
330 INPUT"QUIERES ALMACENAR LOS DATOS EN CASSETTE RESPONDE S PARA SI, N PARA NO"
;R$:R$=UPPER$(R$):IF R$<>"S" AND R$<>"N" THEN SOUND
1,500,10:CLS:GOTO 330
340 CLS:IF R$="N" THEN 460
350 LOCATE 5,4:PRINT"ALMACENAMIENTO DE LOS DATOS EN CASSETTE":PRINT:PRINT:INPUT"
NOMBRE QUE QUIERES DARLE AL ARCHIVO      (MAXIMO 10 C
ARACTERES)";N$
360 K=LEN(N$):IF K<1 OR K>10 THEN SOUND 1,500,10:GOTO 340
370 SPEED WRITE 1:OPENOUT N$
380 PRINT#9,N
390 PRINT#9,V1$:PRINT#9,V2$
400 FOR Z=0 TO N-1
410 PRINT#9,A(Z,0):PRINT#9,A(Z,1)
420 NEXT
450 CLOSEOUT:SPEED WRITE 0
460 CLS:N1=A(0,0):M1=N1:N2=A(0,1):M2=N2
470 FOR Z=1 TO N-1
480 IF A(Z,0)<N1 THEN N1=A(Z,0) ELSE IF A(Z,0)>M1 THEN M1=A(Z,0)
490 IF A(Z,1)<N2 THEN N2=A(Z,1) ELSE IF A(Z,1)>M2 THEN M2=A(Z,1)
500 NEXT
510 LOCATE 1,5:PRINT"VARIABLE ";V1$:LOCATE 1,7:PRINT"MAXIMO:";M1:LOCATE 1,9:PRIN
T"MINIMO:";N1:LOCATE 1,12:PRINT"VARIABLE ";V2$:LOCAT
E 1,14:PRINT"MAXIMO:";M2:LOCATE 1,16:PRINT"MINIMO:";N2
520 LOCATE 1,20:PRINT"LA GRAFICA PERMANECERA EN PANTALLA HASTAQUE PULSES <ENTER>
":LOCATE 1,25:PRINT" AHORA PARA VER LA GRAFICA PULSA
 TECLA"
530 IF INKEY$="" THEN 530
540 CLS:CLG:ORIGIN 0,0
550 PEN 3:L1=LEN(V1$):LOCATE 20-INT(L1/2),25:PRINT V1$:L2=12-INT(LEN(V2$)/2):FOR
 Z=1 TO LEN(V2$):LOCATE 1,L2+Z:PRINT MID$(V2$,Z,1):N
EXT
560 MOVE 80,390:PLOTR 0,0,2:DRAWR 0,-338:DRAWR 550,0
570 LOCATE 1,22:PRINT USING"####";N2:LOCATE 5,22:PRINT"-":LOCATE 1,2:PRINT USING
"####";M2:LOCATE 5,2:PRINT"-"
580 LOCATE 6,23:PRINT"|":LOCATE 39,23:PRINT"|":LOCATE 4,24:PRINT USING"####";N1:
LOCATE 37,24:PRINT USING"####";M1
590 ORIGIN 88,56
600 RX=M1-N1:RY=M2-N2
610 XO=INT((A(0,0)-N1)/RX*526+0.5):YO=INT((A(0,1)-N2)/RY*320+0.5):PLOT XO,YO,1
620 FOR Z=1 TO N-1
630 X=INT((A(Z,0)-N1)/RX*526+0.5):Y=INT((A(Z,1)-N2)/RY*320+0.5):DRAW X,Y
640 NEXT
650 L$=INKEY$:IF L$<>CHR$(13) THEN 650
660 CLS:PEN 1
670 LOCATE 4,8:PRINT"ELIGE UNA DE ESTAS OPCIONES:":LOCATE 2,10:PRINT"1.- VER OTR
A VEZ LA GRAFICA":LOCATE 2,12:PRINT"2.- INTRODUCIR O
TROS DATOS":LOCATE 2,14:PRINT"3.- ABANDONAR EL PROGRAMA"
```

```
680 L$=INKEY$:IF L$="" THEN 680 ELSE IF L$="1" THEN 540 ELSE IF L$="2" THEN RUN
55 ELSE IF L$<>"3" THEN 680
690 INK 1,24:CLS:PRINT"PREPARADO PARA EL SIGUIENTE PROGRAMA":RUN""
1000 REM SACAR DATOS DEL CASSETTE
1050 OPENIN ""
1060 INPUT#9,N:A(1,1)=1:ERASE A:DIM A(N-1,1)
1070 INPUT#9,V1$:INPUT#9,V2$
1080 FOR Z=0 TO N-1
1090 INPUT#9,A(Z,0):INPUT#9,A(Z,1)
1100 NEXT
1110 CLOSEIN
1120 CLS:LOCATE 2,12:PRINT"INTRODUCCION DE LOS DATOS TERMINADA":FOR T=1 TO 2000:
NEXT:CLS:RETURN
9000 DATA "   G R A F I C A S   L I N E A L E S",,," Las graficas lineales se u
tilizan para",la representacion de un conjunto de,da
tos que relacionan dos variables.,," Un ejemplo de estas graficas son las",repr
esentaciones de un importe o de
9010 DATA "cualquier valor respecto al tiempo",como puede ser el indice bursatil
 o el,peso de una persona.,," En la grafica,los dat
os pueden estar",ordenados de menor a mayor para la,variable en el eje X (es lo
mas normal),o no estarlo.,
9020 DATA "  El programa te permitira almacenar los",datos en cassette para futu
ras graficas.,,"    PULSA UNA TECLA PARA COMENZAR"
```





690 Ptas.

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EL SALTARIN

SELECCION DE LOS MEJORES PROGRAMAS